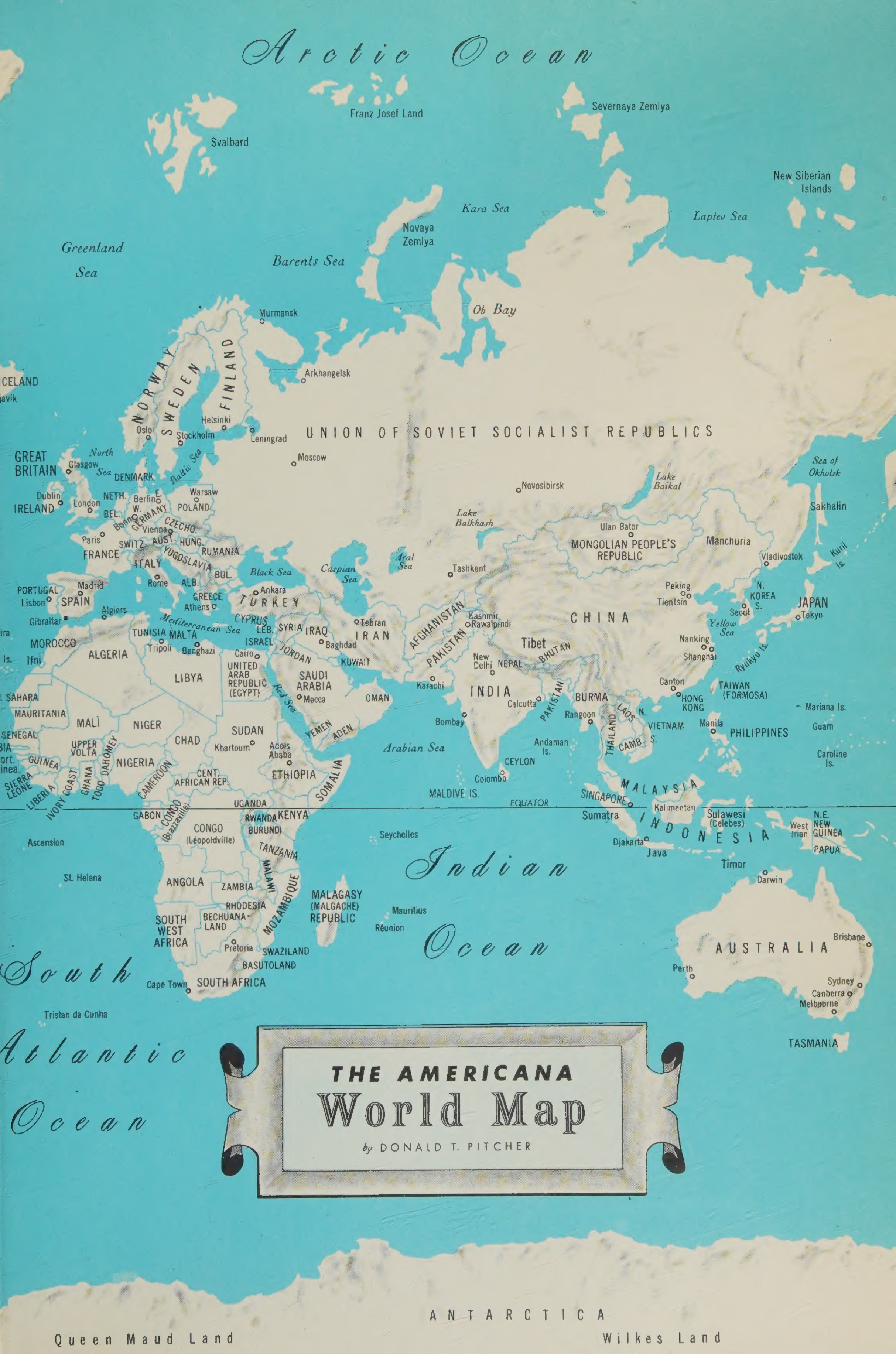
Arctic Ocean
Ellesmere Island
Thule
GREENLAND
Devon I.
Baffin Bay
East Siberian Sea
Wrangel I.
Point Barrow
Beaufort Sea
Victoria Island
Baffin I.
USSR (SIBERIA)
Bering Strait
Nome
ALASKA
Davis Strait
Godthaab
Bering Sea
Anchorage
Hudson Bay
Kamchatka Peninsula
Juneau
Aleutian Is.
CANADA
Winnipeg
Vancouver
Quebec
St. John's
Seattle
Montreal
Ottawa
Toronto
Detroit
Boston
Denver
Chicago
New York
North Pacific
San Francisco
UNITED STATES
Cleveland
Philadelphia
Washington
North
Los Angeles
Azores
Bermuda
Midway Is.
Houston
New Orleans
Atlantic
Gulf of Mexico
Miami
Honolulu
MEXICO
Bahamas
Wake I.
HAWAII
Havana
CUBA
Mexico City
DOM. REP.
Puerto Rico
BR. HON.
HAITI
Virgin Is.
Ocean
HONDURAS
JAMAICA
Caribbean Sea
Ocean
GUATEMALA
EL SALVADOR
NICARAGUA
Clipperton
Caracas
TRINIDAD-TOBAGO
Marshall Islands
COSTA RICA
VENEZUELA
BR. GUIANA
PANAMA
SURINAM
FR. GUIANA
COLOMBIA
Gilbert Islands
EQUATOR
Bogotá
Quito
Galápagos Is.
ECUADOR
Belém
Bismarck Arch.
Marquesas Is.
Recife
Solomon Islands
Ellice Islands
PERU
BRAZIL
Samoa
New Hebrides
Society Islands
Tuamotu Arch.
Lima
La Paz
Brasília
Fiji Islands
N
BOLIVIA
Sucre
New Caledonia
Pitcairn I.
Rio de Janeiro
PARAGUAY
São Paulo
South
Pacific
Asunción
Tasman Sea
CHILE
ARGENTINA
URUGUAY
Auckland
Santiago
Montevideo
Buenos Aires
Wellington
NEW ZEALAND
Ocean
Falkland Is.
Tierra del Fuego
S. Georgia
S. Shetland Is.
S. Orkney Is.
Antarctic Peninsula
Bellingshausen Sea
Weddell Sea
Victoria Land
Alexander I Island
ANTARCTICA
Ross Sea
Marie Byrd



THE AMERICANA World Map

by DONALD T. PITCHER

Arctic Ocean
Franz Josef Land
Severnaya Zemlya
Svalbard
New Siberian Islands
Kara Sea
Laptev Sea
Novaya Zemlya
Greenland Sea
Barents Sea
Ob Bay
Murmansk
Arkhangelsk
ICELAND
avik
NORWAY
SWEDEN
FINLAND
Helsinki
Oslo
Stockholm
Leningrad
UNION OF SOVIET SOCIALIST REPUBLICS
Moscow
GREAT BRITAIN
North Sea
Glasgow
DENMARK
Baltic Sea
Sea of Okhotsk
Lake Baikal
Novosibirsk
Sakhalin
Dublin
IRELAND
London
NETH.
Berlin
E.
W. GERMANY
Warsaw
POLAND
BEL.
Bonn
CZECHO.
Vienna
AUST.
HUNG.
Paris
SWITZ.
FRANCE
RUMANIA
YUGOSLAVIA
ITALY
BUL.
Rome
ALB.
Lake Balkhash
Ulan Bator
MONGOLIAN PEOPLE'S REPUBLIC
Manchuria
Vladivostok
Kuril Is.
Aral Sea
Tashkent
Black Sea
Caspian Sea
PORTUGAL
Lisbon
Madrid
SPAIN
Gibraltar
Algiers
GREECE
Athens
Ankara
TURKEY
Peking
Tientsin
N. KOREA
S.
Seoul
JAPAN
Tokyo
Mediterranean Sea
CYPRUS
LEB.
SYRIA
IRAQ
Tehran
IRAN
Baghdad
AFGHANISTAN
Kashmir
Rawalpindi
CHINA
Yellow Sea
Nanking
Shanghai
TUNISIA
MALTA
ira
MOROCCO
Tripoli
Benghazi
ISRAEL
JORDAN
KUWAIT
PAKISTAN
Tibet
BHUTAN
New Delhi
NEPAL
Ryukyu Is.
Is.
Ifni
ALGERIA
LIBYA
Cairo
UNITED ARAB REPUBLIC (EGYPT)
Red Sea
SAUDI ARABIA
Mecca
OMAN
Karachi
INDIA
Calcutta
PAKISTAN
BURMA
Canton
HONG KONG
TAIWAN (FORMOSA)
SAHARA
MAURITANIA
MALI
NIGER
Mariana Is.
SENEGAL
BIA
UPPER VOLTA
DAHOMEY
CHAD
SUDAN
Khartoum
YEMEN
ADEN
Bombay
Rangoon
LAOS
N.
VIETNAM
S.
THAILAND
CAMB.
Manila
PHILIPPINES
Guam
ort.
GUINEA
inea
NIGERIA
Addis Ababa
Arabian Sea
Andaman Is.
CEYLON
Caroline Is.
SIERRA LEONE
LIBERIA
IVORY COAST
GHANA
TOGO
CAMEROON
CENT. AFRICAN REP.
ETHIOPIA
SOMALIA
Colombo
MALDIVE IS.
MALAYSIA
SINGAPORE
EQUATOR
GABON
CONGO (Brazzaville)
UGANDA
KENYA
Kalimantan
Sumatra
Sulawesi (Celebes)
RWANDA
BURUNDI
CONGO (Léopoldville)
INDONESIA
West Irian
N.E. NEW GUINEA
PAPUA
Ascension
Seychelles
Djakarta
Java
TANZANIA
Timor
Darwin
St. Helena
ANGOLA
ZAMBIA
MALAWI
MOZAMBIQUE
Indian Ocean
MALAGASY (MALGACHE) REPUBLIC
Mauritius
Réunion
RHODESIA
SOUTH WEST AFRICA
BECHUANALAND
Pretoria
SWAZILAND
BASUTOLAND
Brisbane
AUSTRALIA
South Atlantic Ocean
Perth
Cape Town
SOUTH AFRICA
Sydney
Canberra
Melbourne
Tristan da Cunha
TASMANIA
ANTARCTICA
Queen Maud Land
Wilkes Land

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THE
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ANNUAL
1966

AN ENCYCLOPEDIA OF THE EVENTS OF 1965

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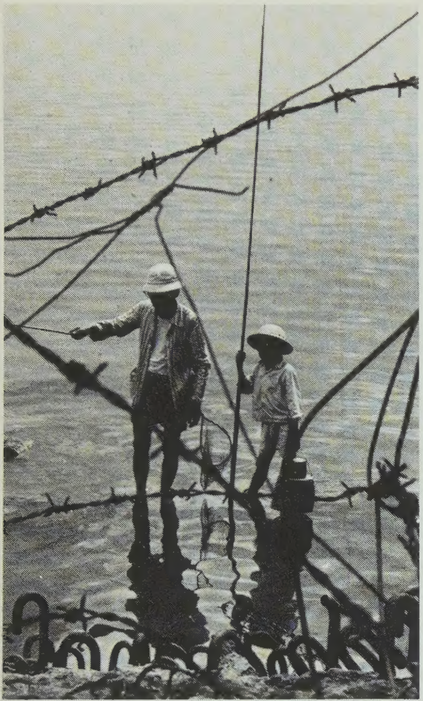
Peace is the leading item on the agenda of mankind, and every effort should be made to lead us toward that goal.
—Lyndon B. Johnson

PREFACE


UPI

MOMENT OF PEACE IN VIETNAM permits two men to fish outside barbed wire protecting U.S. base at Danang.

The year 1965 may well be remembered for the tentative but no less real steps that were taken to achieve man's age-old dream of a lasting peace. Although the most publicized events of the year concerned the progress of war—in Vietnam, the Dominican Republic, and Kashmir—the principal preoccupation of peoples and their statesmen was the pursuit of peace. Thus, the United Nations succeeded in establishing a cease-fire in the conflict between India and Pakistan over Kashmir, and the Organization of American States created a special force to restore peace to the Dominican Republic following a Communist-infiltrated civil war. Pope Paul VI, who seemed to embody the hopes and aspirations for peace held by men everywhere, made a special peace mission to the United Nations. And at the end of this war-afflicted year, President Johnson launched a massive peace offensive intended to lead to negotiations for the peaceful solution of the year's worst dilemma—the war in Vietnam.

Despite the pressing issue of war or peace, in 1965 the peoples of all countries went about their daily tasks, contributing to the improvement of their own societies. In the United States, a sustained effort was made to achieve what President Johnson has called the Great Society by initiating such legislative milestones as Medicare, the Voting Rights Act, and federal aid to education laws. Notable scientific advances of the year included the first "walk" in space by Soviet and American astronauts, the initial rendezvous of two manned spacecraft (Gemini 6 and 7), and the close-up photographing of the moon and the planet Mars. During the year the world was saddened by the deaths of three great humanitarians—Sir Winston Churchill, Adlai Stevenson, and Dr. Albert Schweitzer.

The great and lesser events of 1965 are recorded in this 44th edition of the ENCYCLOPEDIA AMERICANA's yearbook of current events, which reviews in detail the year's political, economic, scientific, and cultural developments. In nearly 500 articles, leading authorities offer a comprehensive review of current trends and developments, designed to keep readers abreast of the great explosion of knowledge now taking place. To help explain some of the more crucial issues of our time, THE AMERICANA ANNUAL presents a number of special features on such topics as the Anti-Poverty Program, Civil Rights, Food Supply, International Finance, Medicare, Pollution, and Water Supply.

Extensive graphic coverage is provided by the hundreds of photographs, maps, captions, charts, and diagrams which supplement the text by showing in meaningful detail the import of historical events, scientific discoveries, economic trends, and other developments. A profuse selection of the year's best news photographs help to recreate the dramatic events described in the articles.

To the thousands of persons who contributed to the writing and printing of this volume, the editors wish to express their sincere gratitude.

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PART 1 • OUTSTANDING DATES OF 1965

PART 2 • TOPICAL SURVEY OF THE YEAR

UPI

CHRONOLOGY · 1965

OUTSTANDING DATES OF 1965

JANUARY

4—New 89th Congress convenes with 295 Democrats and 140 Republicans in House of Representatives, 68 Democrats and 32 Republicans in Senate. President Johnson, in his second State of the Union message, pledges support for South Vietnam and calls for building of Great Society.

20—Lyndon B. Johnson takes oath of office for first full term as president.

21—Indonesia formally withdraws from United Nations.

24—Sir Winston Churchill dies in London at the age of 90.

28—President Johnson names Nicholas deB. Katzenbach as U.S. attorney general, to succeed Robert F. Kennedy.

FEBRUARY

4—French President de Gaulle calls for reorganization of United Nations and return to international gold standard.

7—War in Vietnam is expanded as U.S. begins air attacks on North Vietnam.

18—UN General Assembly adjourns 19th session after U.S. and USSR join to defeat Albania's attempt to force showdown on question of unpaid assessments.

18—Gambia, Britain's last dependency in western Africa, becomes independent nation.

20—U.S. Ranger 8 spacecraft hits the moon after transmitting 7,137 pictures of lunar surface.

21—South Vietnamese Armed Forces Council removes Lt. Gen. Nguyen Khanh as council chairman and commander of the armed forces, thus ending his 13-month rule.

MARCH

9—President Johnson signs into law $1.4 billion federal-state program of economic aid for Appalachia.

14—Argentine congressional elections increase Peronist strength in 192-member Chamber of Deputies.

18–19—Soviet Voskhod 2 spacecraft makes 17-orbit flight with astronauts Pavel I. Belyayev and Aleksei A. Leonov aboard; Leonov becomes first man to float in space as he leaves craft for 10 minutes while tied to lifeline.

19—Henry H. Fowler is appointed U.S. secretary of the treasury, succeeding C. Douglas Dillon.

21–25—About 3,200 Negroes and whites make 54-mile "freedom march" from Selma to Montgomery, Ala., protected by troops. Mrs. Viola Liuzzo, civil rights worker from Detroit, is murdered.

23—U.S. orbits its first two-man spacecraft, Gemini 3, carrying Virgil I. Grissom and John W. Young.

24—U.S. Ranger 9 spacecraft hits moon after sending back 5,814 pictures.

25—Dudley Senanayake takes office as prime minister of Ceylon, heralding reversal of trend toward leftist policies.

30—Terrorist bomb wrecks U.S. embassy in Saigon, killing 17 persons, including 2 Americans.

APRIL

7—President Johnson, in speech at Johns Hopkins University, offers to begin unconditional peace negotiations on Vietnam; proposes $1 billion in U.S. aid for economic development of Southeast Asia, including North Vietnam.

10—Fighting breaks out between Indian and Pakistani troops along disputed border in Rann of Kutch.

11—President Johnson signs into law $1.3 billion federal aid-to-education bill. Tornadoes sweep six Midwestern states, killing 242 persons.

14—West German President Lübke signs act extending statute of limitations on World War II crimes to Dec. 31, 1969.

21—President Bourguiba of Tunisia proposes settlement of Arab-Israeli dispute on basis of 1948 UN plan; is denounced as "traitor" by other Arab leaders.

24–25—Supporters of ex-president Juan Bosch overthrow ruling civilian junta of Donald Reid Cabral in Dominican Republic; civil war begins as anti-Bosch forces capture part of the capital, Santo Domingo.

28—President Johnson sends U.S. troops to Santo Domingo to prevent Communist takeover of Dominican Republic.

MAY

14—Communist China explodes second nuclear device.

15—In United States, national "teach-in" debate on Vietnam is heard by more than 100,000 persons on 100 college campuses by means of special radio hook-ups.

18—U.S. resumes air attacks on North Vietnam after six-day suspension of bombings produce no peace overtures.

23—Inter-American Peace Force organized by OAS begins peacekeeping mission in Santo Domingo.

JUNE

1–2—Cyclone in East Pakistan takes 30,000 lives, following similar disaster May 11–12, when 15,000 died.

4–7—U.S. Gemini 4 spacecraft, manned by James A. McDivitt and Edward H. White, makes 62-orbit flight; White takes record 20-minute "walk" in space.

7—U.S. Supreme Court strikes down Connecticut birth-control law, establishing "right of privacy."

9—Air Vice Marshal Nguyen Cao Ky is made premier of South Vietnam by National Leadership Committee.

19—Col. Houari Boumedienne takes power in Algeria after leading military coup that ousts President Ben Bella.

20—Bernard M. Baruch dies in New York at the age of 84.

21—President Johnson signs bill providing for $4.6 billion cut in federal excise taxes.

22—Japan and South Korea sign treaty restoring diplomatic relations after 55-year lapse.

JULY

1—Cease-fire ends fighting between India and Pakistan in Rann of Kutch.

6—France withdraws permanent representative from European Economic Community, thus blocking further development of Common Market.

14–15—U.S. Mariner 4 spacecraft flies past Mars; measures atmosphere and magnetic field and takes 21 pictures of planet's surface from distances of 10,500 to 6,118 miles.

15—Adlai E. Stevenson dies in London at the age of 65.

20—Supreme Court Justice Arthur J. Goldberg is named to succeed Adlai E. Stevenson as U.S. ambassador to UN.

26—Maldive Islands gain independence from Britain.

27—John W. Gardner is named secretary of health, education, and welfare, succeeding Anthony J. Celebrezze.

28—President Johnson names Washington lawyer Abe Fortas to replace Arthur J. Goldberg on Supreme Court.

30—President Johnson signs Medicare bill, providing medical care for the aged under the Social Security System.

AUGUST

5—Fighting erupts between India and Pakistan in Kashmir.

6—President Johnson signs Voting Rights Act of 1965.

9—Singapore becomes independent after withdrawing from Malaysia federation.

10—President Johnson signs $7.5 billion Housing Act.

11–16—Negroes riot in Watts district of Los Angeles; 34 die, and property damage is put at $40 million.

16—U.S. drops demand that UN members more than two years behind in paying assessments be deprived of vote in General Assembly, as specified in UN charter.

24—United Arab Republic and Saudi Arabia sign new nonintervention pact and peace plan for Yemen.

25—Lawrence F. O'Brien is named U.S. postmaster general, to succeed John A. Gronouski.

SEPTEMBER

2—Communist Chinese Defense Minister Lin Piao calls for revolutionary wars in developing nations.

3—Héctor García-Godoy takes office as provisional president of Dominican Republic after both factions in civil war have accepted (Aug. 31) OAS peace plan.

4—Dr. Albert Schweitzer (90) dies at Lambaréné, Gabon.

6—India extends Kashmir war by invading West Pakistan.

9—French President de Gaulle insists that joint command of NATO end in 1969; says that France will no longer accept integrated defense system for western Europe. Hurricane Betsy devastates Louisiana, killing 81. President Johnson signs bill creating new cabinet-level Department of Housing and Urban Development.

16—Communist China demands that India dismantle military installations on Sikkim-Tibet border within three days.

19—West German Chancellor Erhard's coalition retains control of government as result of elections to Bundestag.

23—Truce signed by India and Pakistan (Sept. 22) at insistence of UN Security Council goes into effect.

24—U.S. and Panama agree in principle on new Panama Canal Treaty that will give Panama sovereignty over Canal Zone.

25—Stephanos Christos Stephanopoulos forms coalition government in Greece, ending governmental crisis.

OCTOBER

1—Indonesian army crushes Communist-backed coup (Sept. 30) and begins campaign to eradicate Communist party.

3—President Johnson signs bill liberalizing U.S. immigration policies.

4—Pope Paul VI makes peace mission to the United Nations; addresses General Assembly in New York and confers with President Johnson.

17—New York World's Fair closes after drawing attendance of 51,607,037 in two-year run.

27—Brazilian President Castelo Branco invokes revolutionary executive powers and dissolves all of the country's political parties.

NOVEMBER

8—President Johnson signs $2.3 billion Higher Education Act of 1965, providing first federal scholarships.

8—Liberals win 131 seats in election for Canadian House of Commons; Lester Pearson remains prime minister.

9–10—Power failure blacks out parts of northeastern U.S. and Canada.

11—Rhodesia declares its independence from Britain; British Prime Minister Wilson imposes economic sanctions.

15—U.S. Supreme Court rules that individuals may refuse to register as members of Communist party.

18—Henry A. Wallace dies at Danbury, Conn., at age of 77.

26—France becomes third nation to launch its own satellite.

DECEMBER

1—First planeload of Cuban refugees arrives in U.S. under airlift agreement of Nov. 6.

8—Pope Paul VI closes Ecumenical Council Vatican II in Rome.

15—Astronauts Walter M. Schirra, Jr., and Thomas P. Stafford maneuver Gemini 6 spacecraft to rendezvous with Gemini 7, launched on Dec. 4.

18—Gemini 7 astronauts Frank Borman and James A. Lovell, Jr., complete record 14-day, 206-orbit flight.

19—President de Gaulle wins runoff election by 55.2% majority for French presidency after failing to win a majority of votes in Dec. 5 election.

24—U.S. suspends air attacks on North Vietnam and begins major diplomatic peace offensive.

CHRONOLOGY • PART 2

TOPICAL SURVEY OF THE YEAR

This survey presents a selected list of the year's most important events with the intention of helping the reader find the dates on which the most significant events of 1965 took place. It also serves as a guide to the most important developments in any subject, particularly political developments in the major countries. Articles on most of the countries, persons, organizations, and general subjects listed may be found in the main text of this volume. This Topical Survey lists main subject headings in alphabetical order, with specific events under the subject headings listed in order of their occurrence. The cross references used herein refer only to headings within this survey, not to articles in the main text.

ACCIDENTS AND DISASTERS—See Chile; El Salvador; Missiles; Pakistan; United States

AFGHANISTAN

Women vote in parliamentary elections for first time; four are elected to the lower house, **Aug. 26–Sept. 3**

Mohammed Hashim Maiwandwal, former ambassador to the U.S., is appointed premier following resignation of Mohammed Yusuf, **Oct. 29**

AFRICA

Heads of state of 13 French-speaking African nations, meeting in Nouakchott, Mauritania, form the *Organisation Commune Africaine et Malgache*, **Feb. 10–12**

Organization of African Unity (OAU) heads of state meet in Accra, Ghana; seven French-speaking nations boycott conference, and 11 others send low-level delegations; resolution urges Britain to prevent Rhodesian independence, **Oct. 22–26**

Six African nations sever relations with Britain in compliance with OAU Council of Ministers resolution (Dec. 3) calling on members to sever ties with Britain if Rhodesian independence move is not crushed by this date, **Dec. 15**

AIR FORCE—See Missiles; United States

ALABAMA

Dr. Martin Luther King, Jr., and 770 other Negroes are arrested while demonstrating against discriminatory voter-registration in Selma, **Feb. 1**

Fifty-seven civil rights demonstrators are injured near Selma as state troopers break up march to Montgomery; incident dramatizes Negroes' voter-registration drive, **Mar. 7**

Three Unitarian ministers are beaten by whites in Selma after participating in civil rights march; one, the Rev. James J. Reeb of Boston, dies 48 hours later, **Mar. 9, 11**

Negro and white civil rights workers make 54-mile "Freedom March" from Selma to Montgomery, Ala., under protection of U.S. Army and federalized National Guard; march ends with rally at state Capitol, **March 21–25**

Mrs. Viola Liuzzo, civil rights worker from Detroit, Mich., is slain on road to Montgomery from Selma, after taking part in Freedom March, **Mar. 25**

State Senate rejects efforts by Gov. George Wallace to amend state constitution to permit him to run for re-election, **Oct. 22**

All-white jury acquits Collie Leroy Wilkins, Jr., in second trial, of killing Mrs. Liuzzo, **Oct. 22**

Federal court convicts three Ku Klux Klan members of conspiracy charges in murder of Mrs. Liuzzo, **Dec. 3**

All-white jury in Selma acquits three men in civil rights killing of the Rev. James J. Reeb, **Dec. 10**

ALGERIA

President Ahmed Ben Bella is ousted by army coup led by Col. Houari Boumedienne, **June 19**

Boumedienne assumes leadership of new 26-man Revolutionary Council; U.S. recognizes new regime, **July 5–6**

Algeria and France sign pact for joint exploitation of oil and gas resources in the Sahara, **July 29**

African-Asian summit conference, which was scheduled to be held at Algiers on Nov. 5, is postponed indefinitely, **Nov. 1**

AMBASSADORS—See United States

ARGENTINA

Congressional elections give Peronists 36 additional seats, for a total of 52, in 192-member Chamber of Deputies; President Arturo Illia's People's Radical Party retains 69 seats, **March 14**

ARMY—See Missiles; United States

ASIA

War in Vietnam is expanded as U.S. begins air attacks on North Vietnam, **Feb. 7**

India and Pakistan observe cease-fire agreement to halt fighting (which began April 10) in the Rann of Kutch, **July 1**

Maldive Islands gain independence from Britain, **July 26**

Fighting between Indian patrols and Pakistani "infiltrators" begins near Srinagar in Kashmir, **Aug. 5**

Singapore withdraws from Malaysian federation and becomes independent, **Aug. 9**

United Arab Republic and Saudi Arabia sign nonintervention pact and propose peace plan for Yemen, **Aug. 24**

Communist China threatens India with "grave consequences" unless India dismantles all military works on the China-Sikkim border within three days, **Sept. 16**

After extending deadline three additional days, China reports that India has complied with the ultimatum, **Sept. 22**

Cease-fire in Kashmir between India and Pakistan, called for by UN Security Council, takes effect, **Sept. 23**

Communist-backed coup is crushed in Indonesia, **Oct. 1**

ASTRONOMY—See Comet Ikeya-Seki; Space Exploration

ATOMIC ENERGY

U.S. Snapshot satellite carries a nuclear reactor, called SNAP 10-A, into earth orbit for first time, **Apr. 3**

Communist China explodes its second atomic bomb, **May 14**

U.S. and Mexico agree to study the feasibility of building large-scale nuclear power and desalination plant for arid southwest regions, **Oct. 7**

U.S. explodes 80-kiloton hydrogen bomb in Aleutian Islands as part of experiments designed to increase ability to distinguish between man-made explosions and natural seismic disturbances, **Oct. 29**

AUSTRALIA

First contingent of Australian combat troops sent to South Vietnam arrives in Saigon, **June 2**

Lord Richard Gardiner Casey is appointed the 16th governor-general of Australia to succeed the retiring Viscount de L'Isle, **July 29**

AUSTRIA

President Adolf Schärf dies in Vienna, **Feb. 28**

Former Chancellor Leopold Figl dies in Vienna, **May 9**

Franz Jonas, Socialist mayor of Vienna, is elected president, defeating former Chancellor Alfons Gorbach, **May 23**

Coalition government of Chancellor Joseph Klaus is dissolved after People's party and Socialist party disagree over budget; caretaker cabinet continues in office, **Oct. 22**

AYUB KHAN, Mohammed—See Pakistan

BALTIMORE

Strike by American Newspaper Guild shuts down city's newspapers, **Apr. 17–June 3**

BARUCH, Bernard M.

U.S. financier, philanthropist, and adviser to seven presidents dies in New York City, **June 20**

BELGIUM

Premier Théo Lefèvre resigns when general elections show lack of support for his government, **May 23**

Pierre Harmel forms new Social Christian-Socialist coalition, ending 2-month government crisis caused by Lefèvre's resignation, **July 27**

BOLIVIA

Alfredo Ovando Candia, armed forces commander, is installed as co-president with René Barrientos Ortuño, **May 26**

Reorganization of nationalized tin mines begins despite armed resistance of miners, widespread strikes, and protest demonstrations, **June 1**

CIVIL RIGHTS: Demonstrators outside the White House in Washington block Pennsylvania Avenue as a sympathy protest during the Selma, Ala., civil rights crisis in March.

UPI

BRAZIL

Castelo Branco government tests its popular support in gubernatorial elections; opposition candidates win key governorships, including Guanabara State, **Oct. 3**

President Castelo Branco invokes revolutionary executive powers; dissolves all political parties and decrees that his successor be elected by Congress instead of by popular vote, **Oct. 27**

BREZHNEV, Leonid I.—See Union of Soviet Socialist Republics

BRITISH GUIANA

Guianese and British leaders, meeting in London, announce that on May 26, 1966, British Guiana will become independent under name of Guyana, **Nov. 19**

BRITISH HONDURAS

Premier George Price and the People's United party are returned to power in first elections to be held under 1963 constitution providing internal self-government, **March 1**

Plans for new capital city, 50 miles inland from present capital of Belize, are announced in London, **March 31**

BULGARIA

Government reports that security police and army units foiled attempt to overthrow Premier Zhivkov, **Apr. 15**

Government announces conviction of 9 "pro-Chinese" army officers and civilians who had been involved in alleged antigovernment plot in April, **June 19**

BURUNDI

Premier Pierre Ngendandumwe, who replaced Albin Niamoya on Jan. 7, is assassinated, **Jan. 15**

King Mwambusta IV names Joseph Bamina as premier, **Jan. 24**

Leopold Biha succeeds Bamina in office, **Sept. 29**

Biha is wounded in attempted coup d'état; country is placed under martial law, **Oct. 19**

CAMBODIA

U.S. and South Vietnamese planes, pursuing the Vietcong, bomb Cambodian border villages, **Apr. 28**

Cambodia breaks relations with U.S. in retaliation for air attack, **May 3**

CAMEROON

President Amadou Ahidjo and Vice President John Foncha are reelected unopposed to five-year terms, **Mar. 27**

CANADA—See also Pearson

Department of External Affairs announces expulsion of two officials of Soviet embassy for espionage activities, **May 8**

Prime Minister Lester Pearson announces resignation of Justice Minister Guy Favreau, following inquiry into bribery case, **June 29**

Guy Rouleau, former parliamentary secretary to Prime Minister Pearson, gives up House of Commons seat in aftermath of bribery scandal, **July 6**

Prime Minister Pearson names two new cabinet members, shifts four others to new positions, and names Guy Favreau president of the Privy Council, **July 7**

Sale of 187 million bushels of wheat to Soviet Union for $450 million is announced, **Aug. 11**

Liberal party wins 131 seats (out of 265) in House of Commons, for a gain of two; former Prime Minister Diefenbaker's Conservative party wins 97 seats, in general elections, **Nov. 8**

Pearson revamps cabinet, filling five vacancies and shifting five ministers, **Dec. 17**

CASTRO, Fidel—See Cuba

CENTRAL AFRICAN REPUBLIC

President David Dacko is ousted in coup led by army chief of staff, Col. Jean Bedel Bokassa, who takes over as chief of state, **Dec. 31**

CEYLON

Dudley Senanayake, leader of the United National Party, which won a plurality in the Mar. 22 parliamentary election, takes office as coalition prime minister, **Mar. 25**

CHICAGO

Rev. Martin Luther King, Jr., leads protest demonstrations against *de facto* segregation of schools, **July 24–27**

Racial demonstration ends in violence; 170 arrested and 85 injured, **Aug. 12–13**

CHILE

President Eduardo Frei's Christian Democratic party wins 82 of 147 seats in Chamber of Deputies, clearing the way for implementation of his reform program, **March 7**

Earthquake in central Chile kills over 400; village of El Cobre, 100 miles north of Santiago, is swept away by water when dam bursts, **March 28**

Senate approves President Frei's copper nationalization bill, providing for participation of government in all future mining developments, **Sept. 9**

CHINA, Communist

Explodes second atomic bomb, **May 14**

Premier Chou En-lai makes cordial five-day visit to Tanzania, **June 4–8**

Defense Minister Marshal Lin Piao calls for revolutionary wars in underdeveloped countries in order to encircle the United States and western Europe; accuses Soviet leadership of collaborating with the U.S. in opposing "people's wars," **Sept. 2**

Accuses India of "naked aggression" against Pakistan, **Sept. 7**

Declares that India has complied with ultimatum issued Sept. 16 and has dismantled military installations on Sikkim-China border, **Sept. 22**

CHINA, Nationalist

U.S. economic aid formally ends, **June 30**

CHURCHILL, Sir Winston S.

British statesman dies in London after suffering a stroke, **Jan. 24**

Many world leaders attend funeral in London, **Jan. 30**

CIVIL RIGHTS—See also Alabama; Chicago; Los Angeles; Mississippi; Supreme Court

Rev. Martin Luther King, Jr., leads some 3,200 white and Negro civil rights workers on "Freedom March" from Selma to Montgomery, Ala., under protection of U.S. Army and federalized National Guard, **March 21–25**

President Johnson signs Voting Rights Act of 1965, suspending use of literacy and other voter-qualification tests in states or counties where less than 50% of voting-age population voted in 1964, **Aug. 6**

CLEVELAND

Mayor Ralph S. Locher is reelected, narrowly defeating a Negro candidate, State Representative Carl B. Stokes, Jr., **Nov. 2**

COLOMBIA

President Guillermo León Valencia declares a state of siege throughout country after widespread student riots, **May 21**

President Valencia forms new cabinet; issues series of economic reform decrees to stem inflation and avoid national bankruptcy, **Sept. 1**

COMET IKEYA-SEKI

Comet, discovered by two Japanese astronomers on Sept. 18, makes a hairpin turn around the sun at a distance of about 300,000 miles; comet is the most brilliant of the century thus far, **Oct. 21**

COMMONWEALTH OF NATIONS

Constitution for proposed West Indies Federation is drafted at meeting of British colonial secretary and regional council of ministers representing St. Lucia, Antigua, Barbados, Dominica, Montserrat, St. Kitts, and St. Vincent, **Feb. 10**

Gambia, last British colony in West Africa, receives its independence, remains in Commonwealth, **Feb. 18**

At 12th Commonwealth meeting in London, member nations restate their opposition to Rhodesian independence without guarantees for majority rule; Britain announces expectation that Basutoland, Bechuanaland, and Swaziland will become independent within three years, **June 17–25**

Four-member Commonwealth heads-of-government mission is formed to seek means of ending war in Vietnam; mission fails after the Soviet Union, Communist China, North Vietnam, and the Vietcong refuse to meet with the group, **June 17–July 5**

Maldive Islands receive independence from Britain, but do not remain in Commonwealth, **July 26**

Singapore withdraws from Federation of Malaysia, becomes an independent state within the Commonwealth, **Aug. 9**

Rhodesia unilaterally declares its independence from Great Britain, with minority white government remaining in control, **Nov. 11**

Britain sets May 26, 1966 as independence date for British Guiana, **Nov. 19**

Britain proposes new constitutional status for Antigua, St. Kitts, Dominica, St. Lucia, St. Vincent, and Grenada: "states in association with Britain," **Dec. 30**

CONGO, Democratic Republic of (Léopoldville)

Premier Moïse Tshombe's Congolese National Convention (CONACO) party wins parliamentary majority in first national elections since independence, **Mar. 18–Apr. 30**

Tshombe claims that Congolese rebellion has ended, **Apr. 29**

White mercenaries capture headquarters of last organized rebel force, **Oct. 11**

At opening of new parliament, President Kasavubu dismisses Tshombe, who was constitutionally required to resign before parliament convened, and names Evariste Kimba as successor, **Oct. 14**

Tshombe's CONACO party blocks confirmation of Kimba in parliament, **Nov. 14**

Army commander Gen. Joseph Mobutu ousts President Kasavubu in bloodless coup and assumes presidency, names Col. Leonard Mulamba as premier, **Nov. 25**

CONGO, Republic of the (Brazzaville)

Former President Fulbert Youlou, in exile in Léopoldville, is sentenced to death in absentia, **June 10**

CONGRESS, U.S.—See United States

CONNECTICUT

U.S. Supreme Court strikes down Connecticut birth control law, establishing new constitutional "right of privacy," **June 7**

UPI

DOMINICAN REPUBLIC: U.S. Marine stands guard over Dominican rebels captured in Santo Domingo during hostilities in the civil war that rocked the island in 1965.

CUBA

Premier Fidel Castro announces 1965 sugarcane harvest of 6 million tons, or 2.2 million over 1964, **June 7**

Five-member directorate of Cuba's ruling party is replaced by 100-member Central Committee headed by 8-man Political Bureau; party is renamed Communist Party (formerly United Party of Socialist Revolution), **Oct. 1**

Castro offers to allow exodus of all Cubans who wish to go to the U.S., **Oct. 1**

President Lyndon B. Johnson, accepting Castro's offer, promises that U.S. will admit all Cuban refugees, **Oct. 3**

Castro announces that Minister of Industry Ernesto (Ché) Guevara, missing since April 19, has left Cuba to work for revolutions in other countries, **Oct. 3**

Cuba and U.S. agree on monthly airlift of 3,000 to 4,000 emigrants from Cuba to U.S., **Nov. 6**

First planeload of Cuban refugees arrives in U.S., **Dec. 1**

CYPRUS

UN Security Council extends peace-keeping force through December 1965, **June 15**

Parliament cancels elections due August 15, extends terms of President Makarios and Greek members of parliament for one year, and abolishes separate Turkish Cypriote voting rights, **July 23**

Turkish Cypriote members of parliament, who have not attended sessions for 18 months, declare that their terms and that of Turkish Cypriote Vice President Fazil Kuchuk are also extended one year, **July 24**

UN Security Council hears charge by Turkey that new electoral laws violate constitutional rights of Turkish Cypriotes; Cyprus replies that Turkey is attempting to intervene in Cyprus' internal affairs; Security Council adopts resolution appealing for restraint on all sides, **Aug. 2–10**

President Makarios pledges help for resettlement and rehabilitation of Turkish Cypriote refugees, **Sept. 23**

President Makarios and Greek Foreign Minister Tsirimokos end 2-day meeting with pledge to fight for the Union of Cyprus and Greece, **Nov. 19**

UN Security Council extends peace-keeping force through June 1966, **Dec. 17**

DAHOMEY

Gen. Christophe Soglo ousts President Sourou Migan Apithy and Vice President Justin Ahomadegbe; names Tahiro Congacou head of provisional government, **Nov. 29**

Soglo takes over as chief of state, **Dec. 22**

DE GAULLE, Charles

French President confers near Paris with West German Chancellor Ludwig Erhard, explores means of achieving unity for Germany and for the European Common Market, **Jan. 19–20**

Calls for reorganization of United Nations and return to international gold standard; declares that reunification of Germany is a long-range French aim, **Feb. 4**

Welcomes new Soviet Ambassador Valerian A. Zorin, and pledges cooperation with Soviet Union to attain peace, **Apr. 10**

Meets with Chancellor Ludwig Erhard in Bonn, Germany, to discuss issues dividing France and West Germany; two-day visit ends without agreement, **June 11–12**

Insists that joint-command of NATO end in 1969; says France will no longer accept an integrated Western defense system, **Sept. 9**

Faces runoff election after failing to win majority of votes in French presidential election; receives 44.6% to 31.7% for François Mitterrand, **Dec. 5**

Wins runoff election for French presidency, receiving 55.2% of votes cast, **Dec. 19**

DIEFENBAKER, John—See Canada

DOMINICAN REPUBLIC—See also Latin America; United Nations

Supporters of ex-President Juan Bosch overthrow ruling junta; anti-Bosch forces capture parts of Santo Domingo, **April 24–25**

U.S. sends troops to Santo Domingo to prevent Communist takeover, **April 28–30**

Inter-American Peace Force organized by OAS (Organization of American States) begins peace-keeping mission in Santo Domingo, **May 23**

Fighting ceases as both factions accept OAS plan for provisional government with Hector García-Godoy as president; number of civil war dead estimated at 2,000, **Aug. 31.**

ECUADOR

Cabinet resigns to allow four-man military junta to name new, predominantly civilian cabinet in order to quiet widespread protests against delay in returning country to civilian rule, **July 17**

Junta ousts one of its members, Air Force Col. Guillermo Freile Posso, for actions tending to thwart junta's plans for returning country to civilian rule, **Nov. 29**

ECUMENICAL COUNCIL—See Roman Catholic Church

EGYPT—See United Arab Republic

ELECTIONS—See Cleveland; Los Angeles; New Jersey; New York City; Virginia

ELIOT, T(homas) S(tearns)

U.S.-English poet, a winner of the Nobel Prize in literature, dies in London, **Jan. 4**

ELIZABETH II—See Great Britain

UPI

GREAT BRITAIN: Queen Elizabeth II (in light coat, left) participates in ceremony at Westminster Abbey on September 19 marking 25th anniversary of the Battle of Britain. During the ceremony, memorial tablet to Sir Winston Churchill was unveiled.

EL SALVADOR

Violent earthquake shakes El Salvador, leaving about 100 persons dead, 500 injured, **May 3**

ERHARD, Ludwig

West German Chancellor confers in France with French President Charles de Gaulle, discusses German unification and West Germany's role in European defense, **Jan. 19–20**

Meets with President Johnson in Washington, D.C., to discuss reunification of Germany and problems relating to the NATO alliance and Vietnam, **June 4**

Meeting in Bonn with French President de Gaulle ends with disagreement on deadline for signing an accord on a common farm market, **June 11–12**

Elections to Bundestag bring victory to parties in Erhard's coalition government, **Sept. 19**

Is reelected chancellor, 272–200, by Bundestag, **Oct. 20**

Confers again with President Johnson in Washington, and in effect abandons effort to create a multilateral nuclear force, **Dec. 21–22**

EUROPE

Members of European Community (EEC) reduce tariffs among member nations by 10%, **Jan. 1**

Executive agencies of EEC, European Atomic Energy Community, and European Coal and Steel Community merge into one administrative body, **Mar. 2**

EEC parliament adopts resolution proposing expanded trade with eastern European nations, **May 10**

Foreign ministers of EEC nations fail to reach agreement on financial arrangements for joint agricultural market, **July 1**

France recalls its permanent representative to EEC, blocking further action by the organization, **July 6**

FANFANI, Amintore—See ITALY; UNITED NATIONS

FORTAS, Abe

Washington lawyer is appointed to U.S. Supreme Court, succeeding Arthur J. Goldberg, who resigned, **July 28**

FOWLER, Henry H.

Appointed secretary of the treasury, to succeed C. Douglas Dillon, **March 18**

FRANCE—See also De Gaulle; Nobel Prizes

President de Gaulle calls for reorganization of the United Nations and return to international gold standard, **Feb. 4**

Withdraws units from SEATO naval maneuvers, **April 23**

France and Britain agree to cooperate in developing two supersonic military planes, **May 17**

Government refuses active role in 1966 NATO exercises, **May 30**

Withdraws permanent representative from European Economic Community in boycott that has effect of delaying programs of organization, **July 6**

French Atomic Energy Commission announces that an improved atomic bomb is in production, **July 12**

Makes public plan for reforming NATO that is aimed at reducing U.S. role in Europe and barring rise of German militarism, **Oct. 16**

Launches its first space satellite into orbit from Hammaguir testing ground in Algerian Sahara; 88-pound capsule is propelled by Diamant rocket, **Nov. 26**

Running against five other candidates, President de Gaulle fails to obtain absolute majority in presidential election, **Dec. 5**

President de Gaulle wins 55.2% of valid votes cast and is reelected to seven-year term in run-off election against François Mitterrand, **Dec. 19**

GAMBIA

Former British colony becomes independent country within the Commonwealth of Nations, **Feb. 18**

New nation admitted to the UN, **Sept. 21**

GARDNER, John W.

Appointed secretary of health, education, and welfare, succeeding Anthony J. Celebrezze, **July 27**

GERMANY—See also ERHARD

East Germany delays highway traffic to West Berlin in reprisal against meeting of West German parliament in Berlin, **April 2–9**

Berlin wall is opened to allow visits between East and West for two-week Easter period, **April 12**

President Lübke signs act extending statute of limitations on war crimes to Dec. 31, 1969, **April 14**

West Germany establishes diplomatic relations with Israel; United Arab Republic, followed by most other Arab states, breaks relations with West Germany, **May 12–16**

Queen Elizabeth II and Prince Philip of Britain visit West Germany and West Berlin, **May 18–28**

Christian Democrats win plurality (245 of 492 seats) in parliamentary elections, **Sept. 19**

Bundestag renames Erhard chancellor in Christian Democrat-Free Democrat coalition government, **Oct. 20**

GHANA

Elections for National Assembly, scheduled for June 9, are canceled; all 198 candidates nominated by Convention People's Party are declared elected without opposition, **June 3**

New National Assembly unanimously elects President Kwame Nkrumah to second five-year term, **June 10**

Nkrumah appoints Alex Quaison-Sackey, Ghanaian president of the UN General Assembly for 1964–65, as Ghana's new foreign minister, **June 13**

Heads of state of Organization of African Unity (OAU) hold conference in Accra, Ghana, **Oct. 21–26**

GOLDBERG, Arthur J.

Supreme Court justice is named U.S. ambassador to the United Nations, succeeding Adlai Stevenson, **July 20**

In first speech as a UN delegate, announces that the United States will no longer insist that General Assembly voting privileges be denied to nations more than two years in arrears on their payments for UN peace-keeping operations, **Aug. 16**

Meets with President de Gaulle in Paris; stresses U.S. aim for early peace in Vietnam, **Dec. 31**

GREAT BRITAIN—See also Wilson

Michael Stewart, previously minister for education and science, becomes foreign secretary, replacing Patrick Gordon Walker, who resigned after losing in second attempt to win reëlection to Parliament, **Jan. 22**

Sir Winston Churchill (90), British wartime prime minister, dies in London, **Jan. 24**

Funeral of Sir Winston Churchill is attended by representatives of 112 countries, including 5 sovereigns, 6 other heads of state, and 16 prime ministers, **Jan. 30**

Queen Elizabeth II and Prince Philip visit Ethiopia and the Sudan, **Feb. 1–8**

Princess Margaret and her husband, the Earl of Snowdon, visit Uganda, **Mar. 13–23**

Labour government announces plans to renationalize steel industry, **Apr. 30**

Princess Margaret and the Earl of Snowdon visit the Netherlands, **May 14–19**

Queen Elizabeth and Prince Philip visit West Germany and West Berlin, **May 18–28**

Edward Heath replaces Alec Douglas-Home, who resigned on July 22, as leader of the Conservative party, **July 28**

Bank of England announces "new arrangements" with 10 nations to bolster the pound, **Sept. 10**

Accompanied by her husband, the Earl of Snowdon, Princess Margaret pays her first visit to the United States; calls on President and Mrs. Johnson and sees New York, San Francisco, Grand Canyon, **Nov. 4–24**

Government denounces Rhodesia's unilateral declaration of independence; Prime Minister Wilson applies economic sanctions and calls the move an "illegal act and one which is ineffective in law," **Nov. 11**

Wilson, in speech to UN General Assembly, demands support for economic sanctions against Rhodesia, **Dec. 16**

Government imposes embargo on oil for Rhodesia; orders Royal Air Force to begin oil airlift to Zambia, **Dec. 17**

Wilson names Roy Jenkins as new home secretary and Mrs. Barbara Castle as new transport minister, **Dec. 22**

GREECE—See also Cyprus

Premier George Papandreou resigns in rift with King Constantine over role of rightist elements in the army; king appoints George Athanasiadis-Novas, president of parliament, as premier, **July 15**

After several weeks of rioting by Papandreou supporters, Parliament rejects Athanasiadis-Novas cabinet, **Aug. 5**

King Constantine appoints Elias Tsirimokos, a Socialist, to form new cabinet, **Aug. 18**

Parliament rejects Tsirimokos cabinet, **Aug. 29**

Stephanos Christos Stephanopoulos succeeds in forming coalition government, ending government crisis, **Sept. 25**

GUATEMALA

Government declares state of siege following upsurge in Communist terrorist activities, **Feb. 24.**

New constitution, replacing the one suspended after 1963 military coup, goes into effect; general elections scheduled for March 1966, **Sept. 15.**

HEATH, Edward—See Great Britain

HO CHI MINH—See Vietnam

HONDURAS

Air Force Col. Oswaldo López Arellano is named president by new National Constituent Assembly, **March 15**

HUMPHREY, Hubert H.

Former Minnesota senator is sworn in as 38th vice president of the United States, filling office vacant since the assassination of President Kennedy in 1963, **Jan. 20**

Attends Paris air show with two U.S. astronauts; meets with President de Gaulle, **June 18–20**

Serves briefly as "acting president" while President Johnson undergoes surgery, **Oct. 8**

Begins week-long Far Eastern diplomatic mission for President Johnson, **Dec. 27**

Attends inaugural of Philippine President Ferdinand E. Marcos in Manila, **Dec. 30**

HUNGARY

African and Asian students break into U.S. embassy in Budapest, protesting U.S. policy in Vietnam, **Feb. 13**

János Kádár steps down as premier, but retains post of Communist party first secretary; he is replaced as premier by Gyula Kallai, **June 28**

INDIA

Fighting erupts between Indian and Pakistani troops in disputed Rann of Kutch region, **Apr. 10**

Prime Minister Lal Bahadur Shastri cancels scheduled trip to the United States after U.S. President Johnson postpones his and other visits; criticizes U.S. bombing raids on North Vietnam, **Apr. 20**

Shastri visits Soviet Union; calls on all nations to prevent the spread of nuclear weapons; receives pledge of "unlimited" political and economic aid and praise for India's nonalignment policy, **May 12–19**

Cease-fire takes effect in Rann of Kutch, **July 1**

Fighting breaks out with Pakistan in Kashmir, **Aug. 5**

Extends Kashmir war by invading West Pakistan, **Sept. 6**

Rejects Communist China's ultimatum (Sept. 16) to withdraw army outposts on Sikkim-China border, **Sept. 17**

UN Security Council truce in Kashmir, signed by India and Pakistan Sept. 22, officially takes effect, **Sept. 23**

INDIANA

Series of tornadoes in northern and central parts of state take 140 lives and cause extensive damage, **Apr. 11**

INDONESIA

Formally withdraws from UN because Malaysia was seated on the Security Council, **Jan. 21**

President Sukarno orders expropriation of all foreign-owned businesses, **Apr. 24**

Communist-backed coup is crushed by army; military leaders begin campaign to outlaw the Communist Party, **Oct. 1**

Defense Minister Nasution is appointed to triumvirate executive body directly under President Sukarno, **Dec. 14**

IRAN

Premier Hassan Ali Mansur dies five days after being struck down by assassin's bullets, **Jan. 26**

Amir Abbas Hoveida, finance minister in Mansur's cabinet, is named premier, **Jan. 27**

Shah Mohammed Reza Pahlavi is unhurt in assassination attempt, **Apr. 10**

IRAQ

Heavy fighting is reported between Iraqi soldiers and Kurdish tribesmen in northern Iraq despite government pledge (Mar. 13) not to resume war, **May 7**

UPI

INDONESIA: Suspected Communists are guarded by soldier after army crushed the Communist-backed coup on October 1. Coup attempt largely discredited President Sukarno's pro-Communist policy in foreign affairs.

Arif Abdul Razzak, a proponent of unity with the United Arab Republic, succeeds Taher Yahya (who resigned Sept. 2) as premier, **Sept. 6**

Razzak flees Iraq after abortive coup against President Arif, **Sept. 15**

Former Deputy Premier Abdul Rahman al-Bazzaz forms new cabinet, **Sept. 21**

IRELAND

Prime Minister Sean Lemass holds historic meeting in Belfast with Northern Ireland's Prime Minister Terence O'Neill, **Jan. 14**

New parliament reelects Lemass as prime minister, **Apr. 21**

Lemass meets in London with Prime Minister Harold Wilson to sign bilateral trade pact that will gradually eliminate import duties between Ireland and Britain, **Dec. 14**

ISRAEL

Israel and West Germany establish full diplomatic relations, **May 13**

Mapai Party ousts its founder, former Premier David Ben-Gurion, after he refuses to back Premier Eshkol, and puts up separate slate of parliamentary candidates, **July 12**

Israeli and Syrian forces clash at Galilee border; UN truce observers stop battle, **Aug. 12**

Premier Eshkol's coalition government wins majority in parliamentary elections, **Nov. 2**

ITALY

President Giuseppe Saragat and French President Charles de Gaulle officially open world's longest road tunnel (7.2 miles) connecting Italy and France under Mont Blanc, **July 16**

Foreign Minister Amintore Fanfani resigns after publication in right-wing weekly *Il Borghese* of comments, attributed to Fanfani, that are critical of Italian and foreign leaders, **Dec. 28**

IVORY COAST

President Félix Houphouët-Boigny is reelected unopposed to second five-year term, **Nov. 7**

JAPAN

Signs treaty restoring full diplomatic relations with South Korea after a 55-year lapse, **June 22**

Premier Sato's Liberal-Democratic party retains its majority in elections to upper house of Diet despite leftists' gains, **July 4**

JOHNSON, Lyndon B.

President delivers second State of the Union message to Congress; outlines massive legislative program aimed at achieving a "Great Society," **Jan. 4**

Proposes an expanded aid-to-education program that would encourage public and parochial schools to share facilities, **Jan. 12**

Asks Congress for new immigration legislation to abolish system of quotas based on national origins, **Jan. 13**

Takes oath of office to begin first full term as president; in his inaugural address says U.S. seeks only "man's dominion over tyranny and misery," **Jan. 20**

Is hospitalized at Bethesda Naval Hospital with a cold aggravated by a bronchial condition, **Jan. 23–26**

In economic report to Congress, predicts U.S. prosperity will continue; concedes rate of unemployment may stay at 5%, **Jan. 28**

Asks U.S. corporations to draw up individual balances of international payments and to reduce by 15 to 20% their spending abroad, and requests banks to reduce foreign lending by 75%, **Feb. 18**

In special message to Congress, proposes campaign to check crime rate; calls for increased law enforcement and for a penetrating analysis of the origins and nature of crime, **Mar. 8**

Signs into law $1.4 billion federal-state anti-poverty program for Appalachia region, **Mar. 9**

Submits to Congress plan for federal aid to encourage music, literature, drama, dance, art, and other cultural activities, **March 10**

Reveals he has ordered 700 federal troops to be on alert for possible duty in civil rights crisis in Selma, Ala.; tells visiting ministers he would not use troops without sufficient legislation, **Mar. 12**

Urges Congress at joint session to pass law ensuring Southern Negroes the right to register and vote; in identifying cause of Negroes, says that "their cause must be our cause, too. . . and we shall overcome," **Mar. 15**

Mobilizes Alabama National Guard and regular forces of nearly 4,000 troops to protect Selma-to-Montgomery civil rights marchers, **Mar. 20**

In special message to Congress, asks regional development plan for needy areas totaling $510 million annually in loans and grants, **Mar. 25**

Promises to offer legislation to bring the Ku Klux Klan "under effective control of law," after arrest of four Klansmen in connection with the slaying of white woman in Alabama, **Mar. 26**

Sends Congress proposals to revise farm program by cutting subsidies and raising agricultural income, **Apr. 5**

Offers to begin "unconditional discussions" for peace in Vietnam; proposes $1 billion aid program for Southeast Asia, to include North Vietnam, in speech at Johns Hopkins University, **Apr. 7**

Signs $1.3 billion aid-to-education bill at Johnson City, Texas, **Apr. 11**

Tours areas of Midwest hit by tornadoes and floods; pledges federal aid and proclaims parts of Indiana, Ohio, and Michigan disaster areas, **Apr. 14**

Postpones scheduled visits of Pakistani President Mohammed Ayub Khan and Indian Prime Minister Shastri because of "congressional work load" and "the situation in Vietnam," **Apr. 16**

Rejects appeals that U.S. suspend bombing of North Vietnam to encourage peace negotiations, **Apr. 17**

Renews offer to talk with any government toward ending war in Vietnam; stresses peace hopes, but defends bombings of North Vietnam and says they will continue, **Apr. 27**

Sends U.S. Marines to Dominican Republic to protect and evacuate American citizens in military-civilian revolt; states he is informed by military authorities that "American lives are in danger," **Apr. 28**

Declares that the Dominican revolution has been taken over by Communists, **May 2**

In national television speech, says Communist China opposes political solution to war in Vietnam, **May 13**

Announces he will seek excise tax cuts of nearly $4 billion, effective in stages beginning July 1, **May 15**

Asks Congress to repeal Section 14(b) of Taft-Hartley Act, which permits states to adopt "right-to-work" laws; also asks extension of minimum wage coverage and more aid for jobless workers, **May 18**

Declares that "old distinction" between civil war and international war is obsolete; urges establishment of "new international machinery" to deal with Communist subversion in Latin America, **May 28**

Strongly defends his actions in Dominican Republic crisis; asserts administration members had been "unanimous" in decision to intervene militarily, **June 1**

Asks Congress for $89 million as first installment on American-supported development plan for Southeast Asia, **June 1**

Declares that legal freedom and equality are not enough to guarantee Negroes full share of American justice and plenty; says "the next and more profound stage of the battle for civil rights" is just beginning, **June 4**

Authorizes commitment of U.S. ground forces in Vietnam to combat if requested by Vietnamese army, **June 8**

At opening of 20th anniversary ceremonies of United Nations at San Francisco, urges efforts to begin peace negotiations on Vietnam, **June 25**

Signs bill on coinage; new quarters and dimes are to be produced without silver, and silver content of half dollars to be reduced from 90% to 40%, **July 23**

Announces increase of military strength in Vietnam from 75,000 to 125,000; defers reserve call but raises monthly draft from 17,000 to 35,000, **July 28**

Signs Medicare legislation at Harry S Truman Library in Independence, Mo., with former president as guest, **July 30**

Signs Voting Rights Act of 1965; says that "today is a triumph for freedom as huge as any victory won on any battlefield," **Aug. 6**

Rejects request by Ghanaian President Kwame Nkrumah for temporary halt in air raids on North Vietnam; asks Nkrumah to tell Hanoi that U.S. will stop fighting "when aggression ends," **Aug. 7**

Signs $7.5 billion Housing Act of 1965; calls it "the single most important breakthrough" in the housing field, **Aug. 10**

Rebukes Negro rioters in Los Angeles as destroyers of rights, at White House Conference on Equal Employment Opportunity, **Aug. 20**

Personal intervention in negotiations results in tentative contract agreement between the United Steelworkers union and the steel industry, **Sept. 3**

Signs bill establishing a National Foundation on the Arts and the Humanities; announces intention to create performing companies supported by federal funds, **Sept. 30**

Signs bill at the base of the Statue of Liberty liberalizing U.S. immigration procedures, **Oct. 3**

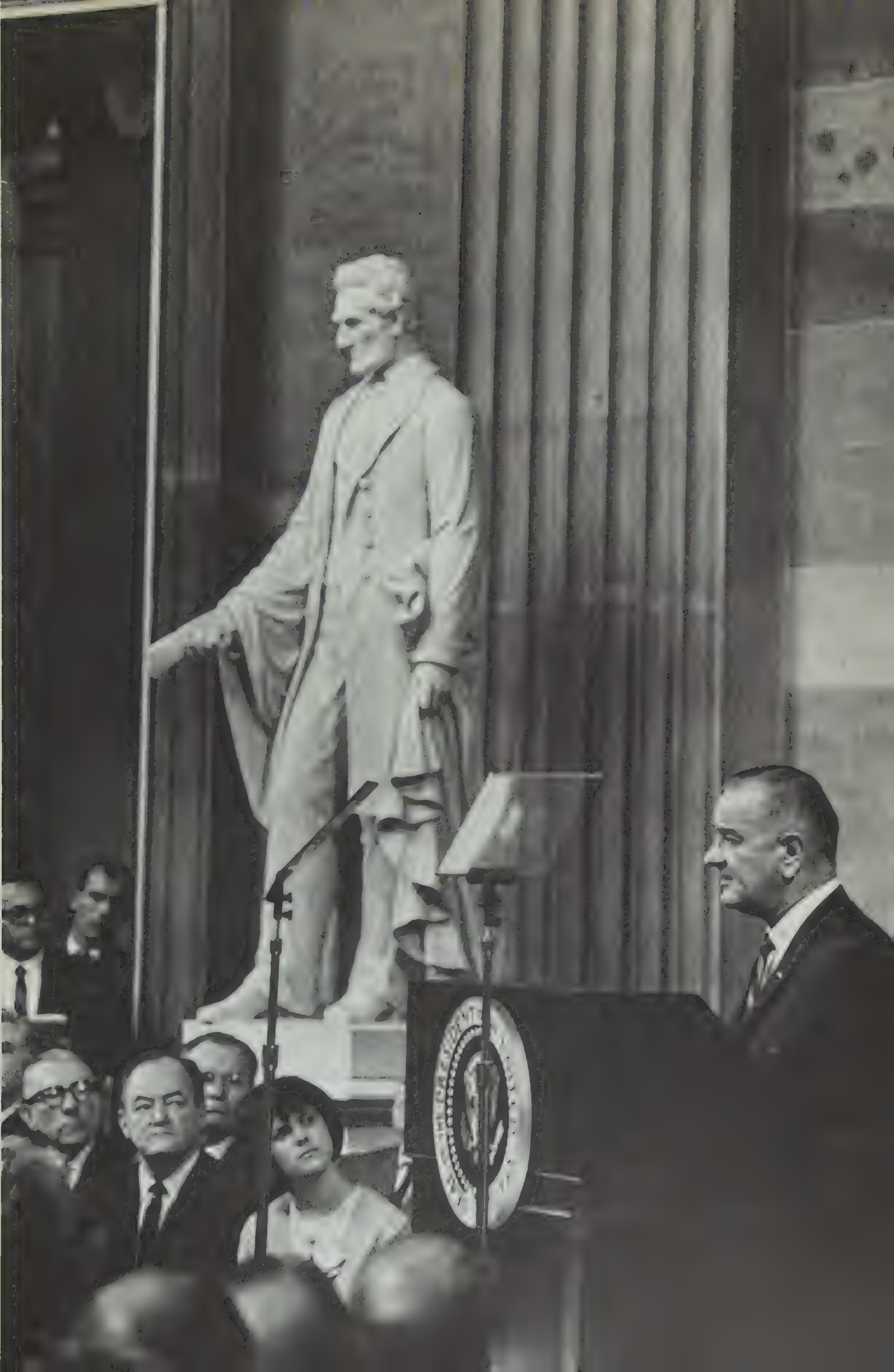
Meets with Pope Paul VI in New York City and discusses threats to peace and other world problems, **Oct. 4**

Undergoes successful surgery in Bethesda Naval Hospital for removal of gallbladder; additional unscheduled surgery is performed to remove kidney stone, **Oct. 8**

Signs $3.2 billion foreign aid bill, **Oct. 20**

JOHNSON: Urging Negroes to register and vote, the president promised swift enforcement of 1965 Voting Rights Act, which he signed Aug. 6 after ceremony in Capitol Rotunda.

BLACK STAR



Signs $2.3 billion Higher Education Act of 1965, which provides new scholarships, loans, and work opportunities for students, **Nov. 8**

Pledges U.S. aid for Alliance for Progress beyond terminal date of 1971, in message to Second Special Inter-American Conference meeting in Rio de Janeiro, **Nov. 22**

Predicts another record year for American economy in 1966, without inflation; says goods and services can be produced without "overheating the economy," **Dec. 2**

Confers in Washington with three world leaders—Pakistani President Mohammad Ayub Khan, British Prime Minister Harold Wilson, and West German Chancellor Ludwig Erhard—within eight days, **Dec. 14–21**

Begins major diplomatic offensive aimed at opening negotiations in Vietnam war; suspends bombing of North Vietnam, dispatches leading U.S. diplomats to major world capitals, **Dec. 25–31**

JORDAN

King Hussein designates his 18-year-old brother, Prince Hassan, as heir to the throne, **Apr. 1**

KASHMIR—See Asia; India; Pakistan

KATZENBACH, Nicholas deB.

Appointed U.S. attorney general, after having acted in that capacity since the resignation on Sept. 3, 1964, of Robert Kennedy, **Jan. 28**

KING, Martin Luther, Jr.—See Alabama; Civil Rights

KOREA

South Korea and Japan sign treaty restoring full diplomatic relations after 55 years, **June 22**

Syngman Rhee, first president of South Korea, dies in exile in Hawaii at the age of 90, **July 19**

National Assembly approves plan to send 15,000-man combat division to South Vietnam, **Aug. 13**

Assembly ratifies treaty with Japan after opposition members resign, **Aug. 14**

KOSYGIN, Aleksei N.

Soviet premier pledges 1965 peace effort; says Soviet Union will carry out an "active policy of peace and relaxation of international tension," **Jan. 1**

Receives cool reception from Chinese leaders during stopovers in Peking before and after his visit to North Vietnam, **Feb. 5, 6, 10**

Discusses Soviet military and economic assistance with leaders of North Vietnamese regime, during visit to Hanoi, **Feb. 6–10**

Declares that policy of extending military operations in Vietnam is moving U.S. "step by step toward a very dangerous brink"; speech announcing new five-year-plan stressing consumer goods is made public, **April 19**

Heads list of Communist leaders marking 20th anniversary in Berlin of the end of World War II, **May 7**

Praises India's policy of nonalignment during visit of Prime Minister Shastri to Soviet Union, **May 12**

Meets, on two occasions, with Averell Harriman, U.S. ambassador at large, **July 15 and 21**

Confers with five U.S. senators visiting Moscow on round-the-world fact-finding tour, **Nov. 19**

KUWAIT

Sheikh Abdullah al-Salem al-Sabah dies, **Nov. 24**

Younger brother of Sheikh Abdullah, Sheikh Sabah al-Salem al-Sabah, is sworn in as new amir, **Nov. 27**

Sheikh Jaber al-Ahmad al-Jaber is appointed prime minister, succeeding the new amir, **Nov. 30**

LABOR—See also Baltimore; New York City

Longshoremen end strike on Atlantic and Gulf coasts after 33-day tieup of ports, **Feb. 14**

Executive council of AFL-CIO initiates drive for repeal of "right to work" section of Taft-Hartley Act; asks for prompt congressional action, **Feb. 22**

Secretary of Labor W. Willard Wirtz announces settlement of 63-day strike by marine engineers against eight companies, **Aug. 17**

President Johnson announces settlement of 75-day strike of seagoing personnel in Atlantic and Gulf ports, **Aug. 29**

President Johnson announces "essential agreement" on steel contract, averting nationwide strike, **Sept. 3**

United Steelworkers of America and steel industry sign three-year contract, **Sept. 6**

LAOS

General Phoumi Nosavan and Siho Lamphouthacoul attempt to overthrow government, and then flee to Thailand, **Jan. 31**

Premier Souvanna Phouma announces his government's opposition to the use of U.S. ground troops to seal off the Ho Chi Minh trail in Laos, **Dec. 16**

LATIN AMERICA

U.S. government representatives visit Panama, Colombia, Nicaragua, and Costa Rica to investigate possible sites for proposed new sea-level canal, connecting Atlantic and Pacific oceans, **Jan. 7–Feb. 3**

Organization of American States (OAS) adopts resolution creating Inter-American Peace Force to keep order in Dominican Republic during civil war there, **May 6**

OAS establishes mediation committee to restore governmental machinery in Dominican Republic, **May 10**

OAS plan for provisional government is accepted by rival Dominican factions, **Aug. 31**

U.S. and Panama agree in principle on new Panama Canal treaty recognizing Panama's sovereignty over Canal Zone and making Panama a partner in canal operations, **Sept. 24**

Second Special Inter-American Conference, held in Rio de Janeiro, adopts principle of mutual assistance for economic development; receives President Johnson's pledge of U.S. aid to Alliance for Progress beyond 1971, **Nov. 17–30**

LEBANON

Premier Hussein Oueini resigns, **July 20**

Former Premier Rashid Karami forms new cabinet, **July 25**

LIBYA

Premier Mahmud Muntasser resigns and is replaced by Foreign Minister Hussein Mazik, **Mar. 20**

LODGE, Henry Cabot

Named ambassador to South Vietnam for the second time, succeeding Gen. Maxwell Taylor, **July 8**

LOS ANGELES

Mayor Samuel W. Yorty is reelected for a second term, defeating Congressman James Roosevelt, **Apr. 7**

Racial violence, including rioting, arson, and plundering, in the Negro section of Watts results in 34 deaths, 1,032 injuries, 3,952 arrests, and property damage estimated at $40 million, **Aug. 11–15**

LOUISIANA

Federal Judge Herbert W. Christenberry enjoins Bogalusa police from using violence or threats to prevent Negroes from exercising their civil rights, **July 10**

Four hundred troopers avert clash between Negroes and white segregationists in demonstration in Bogalusa, **July 11**

Gov. John McKeithen establishes the Louisiana Commission on Race Relations, **Aug. 26**

Hurricane Betsy, with winds up to 180 miles an hour, brings widespread devastation to southeastern Louisiana; 81 persons are killed, **Sept. 9**

McNAMARA, Robert S.

U.S. secretary of defense concludes five-day tour of South Vietnam; says "overall situation continues to be serious," and has deteriorated in many respects, **July 20**

In Saigon for 30-hour inspection tour, declares: "We have stopped losing the war," **Nov. 29**

Announces plans for consolidation or discontinuance of a total of 149 military bases, **Dec. 6 and 8**

Announces plans for reducing Strategic Air Command's long-range bomber force by two thirds by 1971, **Dec. 8**

Addressing NATO meeting in Paris, warns of Communist China's nuclear threat; pledges there will be no withdrawal of "major combat units" from American forces in western Europe, **Dec. 15**

MALAGASY REPUBLIC

President Philibert Tsiranana is elected to second seven-year term, **Mar. 30**

MALAWI

Prime Minister Hastings Banda announces that Malawi will become a republic on July 6, 1966, but will remain within the Commonwealth, **July 20**

MALAYSIA

Singapore withdraws from Malaysian federation, **Aug. 9**

Prince Ismail Nasiruddin Shah is elected paramount ruler by council of 9 Malayan states, **Aug. 19**

MALDIVE ISLANDS

Britain grants islands independence, **July 26**

Nation is admitted to United Nations, **Sept. 21**

MARGARET, Princess—See Great Britain

MARS—See Space Exploration

MAURITANIA

Thirteen French-speaking African nations meet in Nouakchott, Mauritania, and form Organisation Commune Africaine et Malgache (OCAM), **Feb. 10–12**

MEXICO—See also Atomic Energy

Thirty Communists and leftists are arrested on charges of antigovernment conspiracy, **April 13–14**

President Gustavo Díaz Ordaz, in the first formal report of his administration, outlines a five-year development program for 1966–70, **Sept. 1**

MINNESOTA

Tornado hits 15 Minneapolis suburbs, killing 13 persons and injuring 400, **May 6**

MISSILES

President Johnson discloses program to spend $2 billion to develop a Poseidon missile that will increase the striking power of missile-carrying nuclear submarines, **Jan. 18**

Lance, U.S. Army's new mobile, lightweight missile, is fired successfully in first test, **Mar. 17**

Sprint missile, designed to intercept and destroy intercontinental ballistic missile (ICBM) warheads, passes first flight test, **Mar. 29**

U.S. Air Force announces that Minuteman 1 ICBM's will be replaced by Minuteman 2 missiles at cost of $1 billion, **May 19**

Subroc antisubmarine missiles have been fired from submerged U.S. nuclear submarine in tests conducted in Pacific Ocean, (reported) **June 15**

Air Force announces that the last of 800 Minuteman 1 missiles is operational, **June 30**

Explosion and fire in a Titan 2 missile silo near Searcy, Ark., kills 53 civilian workers, **Aug. 9**

NASA successfully tests huge 260-inch-diameter, solid-propellant rocket; the test model attains a maximum thrust of 3.5 million pounds, **Sept. 25**

Western Electric Company is awarded $21.5 million contract to develop an improved Nike-Zeus missile for defense against ICBM warheads, **Sept. 29**

Soviet Union claims it can put a missile in earth orbit and drop a warhead from the missile during any orbit, **Nov. 7**

MISSISSIPPI

Gov. Paul B. Johnson, Jr., sends 650 National Guardsmen into Natchez to avert racial violence; Negro leaders drop plans for protest march, **Sept. 2**

Attempts by Negroes to unseat three Mississippi congressmen is rejected by the U.S. House of Representatives, **Sept. 17**

MOON—See Space Exploration

MOROCCO

King Hassan II declares state of emergency, suspends constitution, and takes over government as premier after political parties fail to form a government, **June 7**

MURROW, Edward R.

U.S. radio and television reporter dies at his Pawling, N.Y., home of cancer, **Apr. 27**

NETHERLANDS

Premier Victor Marijnen and his government resign in disagreement over commercial advertising on radio and television programs, **Feb. 26**

Joseph M.T.L. Cals forms new Catholic People's party coalition government, **Mar. 15**

NEW JERSEY

Democratic Gov. Richard J. Hughes wins overwhelming reelection as Democrats also capture complete control of the state Legislature for the first time in more than 50 years, **Nov. 2**

NEW YORK CITY

Welfare workers' strike curtails public assistance services as 8,000 defy law prohibiting strikes by government employees, **Jan. 5–31**

Pope Paul VI, in historic visit, speaks to UN General Assembly, celebrates Mass at Yankee Stadium, and inspects Vatican pavilion at World's Fair, **Oct. 4**

Agreement between New York *Times* and Newspaper Guild ends 25-day newspaper strike, **Oct. 10**

New York World's Fair ends two-season run, with a total attendance of 51,607,037, **Oct. 17**

John V. Lindsay, Republican-Liberal candidate, is elected mayor, defeating Democrat Abraham Beame and Conservative William Buckley, **Nov. 2**

Regional power failure blacks out city and most of northeastern United States, **Nov. 9–10**

NEW YORK STATE

Democrats, in control of both houses of state Legislature, feud among themselves over leadership posts; intervention by Republicans in behalf of candidates supported by Democratic Mayor Robert Wagner, Jr., of New York City, resolves 30-day legislative deadlock, **Feb. 4**

Governor Rockefeller signs bill ending 350-year-old death penalty as punishment for murder, kidnapping, and treason, **June 1**

NEW ZEALAND

In UN-sponsored election, Cook Islands choose to remain a dependency of New Zealand with local self-government; first parliament is elected, **Apr. 21**

NIGER

President Hamani Diori escapes assassination attempt; blames outlawed Sawaba party, **Apr. 13**

President Diori reelected to second 5-year term, **Sept. 7**

NIGERIA

Elections are held in districts for which no votes were recorded in controversial 1964 election; Nigerian National Alliance retains majority, **Mar. 20**

NOBEL PRIZES

Three French scientists connected with Pasteur Institute are awarded 1965 prize in physiology or medicine for discoveries of regulatory activities inside body cells: François Jacob of the Collège de France, and André Lwoff and Jacques Monod of the University of Paris, **Oct. 14**

Mikhail Sholokhov, Russian novelist, is named winner of 1965 literature prize; he is third Russian ever to win a Nobel literature award, **Oct. 15**

Robert Burns Woodward, of Harvard University, is named winner of chemistry prize for his role in synthesis of chlorophyll, **Oct. 21**

Two Americans and a Japanese are named winners of physics prize for their research in quantum electrodynamics: Julian Seymour Schwinger of Harvard University, Richard Phillips Feynman of California Institute of Technology, and Shinichiro Tomonaga of Tokyo Education University, **Oct. 21**

Henry R. Labouisse, executive director of the agency, accepts the 1965 Nobel Peace Prize awarded to United Nation's Children's Fund, **Dec. 10**

NORTH ATLANTIC TREATY ORGANIZATION—See also de Gaulle; McNamara

U.S. Adm. Thomas H. Moorer replaces U.S. Adm. Harold P. Smith as Supreme Allied Commander, Atlantic, **May 1**

NATO Council of Ministers holds spring meeting in London, makes declaration calling for reunification of Germany, **May 11–12**

British Vice Adm. Sir John Frewen replaces Adm. Sir Charles Madden as Commander in Chief, Allied Forces Eastern Atlantic, **July 1**

At opening of year-end NATO Council meeting, U.S. Secretary of State Rusk says U.S. war effort in Vietnam is also vital to Europe, **Dec. 14**

NORTHERN IRELAND—See Ireland

NORWAY

Labor party loses its majority in parliamentary elections, **Sept. 12–13**

Premier Einar Gerhardsen resigns and is replaced by Per Borten, leader of Center party, at head of coalition government, **Oct. 11–12**

O'BRIEN, Lawrence F.

Assistant to President Johnson is appointed postmaster general, succeeding John A. Gronouski, **Aug. 29**

PAKISTAN—See also Asia; India

President Mohammed Ayub Khan is elected to second five-year term, **Jan. 2**

Hostilities between Pakistan and India erupt in disputed Rann of Kutch, **Apr. 10**

Cease-fire takes effect in Rann of Kutch, **July 1**

PIX

PAKISTAN: On their way to the front in Kashmir, where fighting broke out between Pakistan and India on Aug. 5, Pakistani army units guard against Indian air attacks.

PIX

RHODESIA: Despite appeals to Prime Minister Ian Smith (l.), Oct. 25–30, British Prime Minister Wilson (r.) failed to prevent Rhodesian declaration of independence on Nov. 11.

Hostilities with India erupt in Kashmir, **Aug. 5**

Accepts UN Security Council truce for Kashmir, **Sept. 22**

Threatens to quit the UN unless the Kashmir dispute is settled permanently by a UN-sponsored plebiscite, **Sept. 28**

More than 45,000 die as result of cyclones and tidal waves around Bay of Bengal, **May 12, June 1, Dec. 15**

President Ayub Khan visits the United States; addresses the UN General Assembly on the matter of permanent peace in Kashmir and holds cordial talks with President Johnson in Washington, **Dec. 12–16**

PANAMA

In a joint statement, Presidents Marco Robles and Lyndon Johnson announce agreement in principle on new Panama Canal treaty that will give Panama sovereignty over the Canal Zone and a share in canal operations and profits, **Sept. 24**

PAUL VI, Pope

Pays historic visit to New York City, during which he addresses the United Nations General Assembly, confers with President Johnson, celebrates a Mass at Yankee Stadium, and stops at the Vatican pavilion at the World's Fair, **Oct. 4**

Joins with Patriarch Athenagoras I in announcing a relaxation of the 900-year schism between the Roman Catholic and Eastern Orthodox churches; joint declaration expresses hope that the two churches might become one, **Dec. 7**

Closes historic ecumenical council in colorful ceremonies in Rome, **Dec. 8**

PEARSON, Lester B.—See also Canada

Canadian prime minister, in address at Temple University, suggests that a pause in U.S. bombings of North Vietnam might encourage negotiations, **Apr. 2**

Discusses proposal for a suspension in bombings with President Johnson during meeting at Camp David, Md., **Apr. 3**

Meets with Prime Minister Shastri of India, in Ottawa, for discussions on Vietnam and world problems, **June 11**

Makes seven changes in cabinet, following resignation of Justice Minister Guy Favreau, **July 7**

Announces general election will be held in Canada on Nov. 8, in move to bolster party's rule, **Sept. 7**

His Liberal party wins narrow victory in parliamentary elections, defeating John G. Diefenbaker's Conservatives, **Nov. 8**

Revamps his cabinet; fills five vacancies and shifts five ministers, **Dec. 17**

PERU

New cabinet headed by Daniel Becerra de la Flor is sworn in to avoid open split between executive and legislature over handling of Communist terrorism, **Sept. 15**

PHILIPPINES

Senator Ferdinand E. Marcos, Nationalist candidate for president, defeats Liberal incumbent President Diosdado Macapagal in election, **Nov. 9**

Marcos is sworn in as president, **Dec. 30**

PORTUGAL—See also United Nations

Lisbon police put down riot begun when university students demonstrate to protest trial of four students accused of membership in Communist party, **Feb. 2**

National electoral college reelects President Américo Deus Rodrígues Tomás, **July 25**

PUERTO RICO

Roberto Sánchez Vilella takes office as governor, **Jan. 2**

RHODESIA

Rhodesian Front party of Prime Minister Ian Smith wins all 50 parliamentary seats in restricted elections; Smith interprets results as mandate for immediate independence, **May 7**

Smith and British Prime Minister Harold Wilson end meeting in London, but fail to agree on terms for Rhodesia's independence, **Oct. 8**

Smith and Wilson confer in Salisbury in unsuccessful effort to avert crisis, **Oct. 25–29**

Rhodesia unilaterally declares its independence; government institutes emergency regulations, **Nov. 11**

UN Security Council condemns declaration of independence as illegal; calls on states to deny Rhodesia recognition and assistance, **Nov. 12**

Britain imposes oil embargo on Rhodesia; Smith's government bars shipment of oil to Zambia in countermove, **Dec. 17–18**

ROMAN CATHOLIC CHURCH

Pope Paul VI makes historic visit to United States; meets with President Johnson, addresses UN General Assembly, celebrates Mass at Yankee Stadium, and inspects Vatican pavilion at New York World's Fair, **Oct. 4**

Ecumenical Council Vatican II gives final approval to decree offering friendship and respect to other religions, decrying anti-Semitism, and denying collective Jewish guilt for crucifixion of Jesus, **Oct. 15**

Pope Paul VI closes Ecumenical Council with proclamation of 16 declarations, decrees, and constitutions made since 1962 as "firm, valid, and effective," **Dec. 8**

RUMANIA

Nicolae Ceausescu and Chivu Stoica are chosen to replace Gheorghe Gheorghiu-Dej (who died on March 19) as general secretary of the Rumanian Workers' party and president of Rumania, respectively, **March 23**

Rumanian Workers' party officially changes name to Rumanian Communist party, **June 2**

Grand National Assembly adopts new constitution, which changes official name of country to "Socialist Republic of Rumania"; reelects President Chivu Stoica and Premier Ion Gheorghe Maurer, **Aug. 21**

RUSK, Dean

U.S. secretary of state warns that no part of North Vietnam is safe from U.S. attack while North Vietnamese fight in the South; declares that "the idea of sanctuary is dead," **July 11**

Defends administration's refusal to "have a contact" with North Vietnam in 1964; says that talks without preconditions would be accepted now, **Nov. 26**

At meeting of North Atlantic Treaty Organization, says U.S. war effort in Vietnam is also vital to Europe, **Dec. 14**

RUSSIA—See Union of Soviet Socialist Republics

SAUDI ARABIA

Signs agreement with the United Arab Republic for nonintervention and peace in Yemen, **Aug. 24**

SCHWEITZER, Albert

Alsatian-born physician, theologian, missionary, musician, and philosopher dies at his jungle hospital at Lambaréné, Gabon, at the age of 90, **Sept. 4**

SHASTRI, Lal Bahadur—See India

SINGAPORE

Singapore withdraws from Malaysian federation and becomes independent; Prime Minister Lee Kuan Yew declares that Singapore will continue to cooperate with Britain in defense matters, but will seek closer ties with Communist countries and Indonesia, **Aug. 9**

Is admitted to the United Nations, **Sept. 21**

Becomes member of the Commonwealth of Nations, **Oct. 16**

SOUTH AFRICA

Government suspends 90-day detention law, **Jan. 11**

Parliament enacts stringent security legislation, including bill empowering government to detain witnesses in criminal cases for six months, **June 15**

SPACE EXPLORATION

U.S. Ranger 8 spacecraft crashes on moon in Sea of Tranquillity after transmitting to earth 7,137 pictures of lunar surface, **Feb. 20**

- Soviet Union's Voskhod 2 spacecraft completes a 17-orbit flight with Pavel A. Belyayev and Aleksei A. Leonov aboard; Leonov becomes the first man to leave a spacecraft and "walk" in space, **Mar. 18–19**
- Virgil I. Grissom and John W. Young maneuver the Gemini 3 spacecraft during successful three-orbit flight, **Mar. 23**
- Ranger 9 spacecraft hits moon; sends 5,814 pictures of the region near the crater Alphonsus, **Mar. 24**
- U.S. Snapshot satellite is orbited with a nuclear-fission reactor for first time; reactor provides nuclear energy for electric power in satellite, **Apr. 3**
- NASA launches Early Bird, world's first commercial communications satellite, into a synchronous orbit at an altitude of 22,300 miles, **Apr. 6**
- Russians launch Molyniya 1, apparently their first communications satellite, **Apr. 23**
- Soviet Luna 5 spacecraft strikes the moon, failing in an attempt to make a soft landing, **May 12**
- James A. McDivitt and Edward H. White II make successful 62-orbit, four-day flight in Gemini 4; White takes a record-breaking 20-minute "walk" in space, **June 3–7**
- Soviet Luna 6, launched on June 8, reportedly missed the moon by 100,000 miles, **June 10**
- Mariner 4 flies past Mars, takes 21 pictures of planet's crater-pocked surface at distances ranging from 10,500 to 6,118 miles, and measures its atmosphere and its magnetic field; first picture is transmitted over a distance of 134 million miles, **July 14–15**
- Soviet Union places 26,000-pound Proton 1 spacecraft into orbit—the heaviest object orbited to date, **July 16**
- Soviet space probe Zond 3 photographs far side of moon at distances ranging from 7,200 to 6,500 miles, **July 20**
- Leroy G. Cooper, Jr., and Charles Conrad, Jr., ride in Gemini 5 for an eight-day, 120-orbit flight that breaks previous flight-duration records, **Aug. 21–29**
- President Johnson orders Defense Department to construct a manned orbiting laboratory for determining the military value of conducting men in space operations; two-man crew would return to earth in Gemini-type spacecraft, **Aug. 25**
- Soviet Luna 7 spacecraft crashes into moon in the Ocean of Storms region, apparently in third unsuccessful attempt at a soft landing, **Oct. 8**
- France becomes third nation to orbit a satellite; 88-pound A-1 satellite is launched by a French Diamant rocket from French launch base at Hammaguir, Algeria, **Nov. 26**
- Frank Borman and James A. Lovell, Jr., rocket into orbit in Gemini 7 for rendezvous and flight duration mission, **Dec. 4**
- Soviet Union's Luna 8 hits moon in Ocean of Storms region in fourth unsuccessful attempt to make soft landing, **Dec. 7**
- Astronauts Walter M. Schirra, Jr., and Thomas P. Stafford maneuver Gemini 6 spacecraft to rendezvous with Gemini 7 at altitude of 184 miles; Gemini 6 flies around Gemini 7, travels in formation, and returns to earth, **Dec. 15–16**
- Astronauts Borman and Lovell return to earth in Gemini 7 after record-breaking 14-day, 206-orbit trip, **Dec. 18**

SPAIN

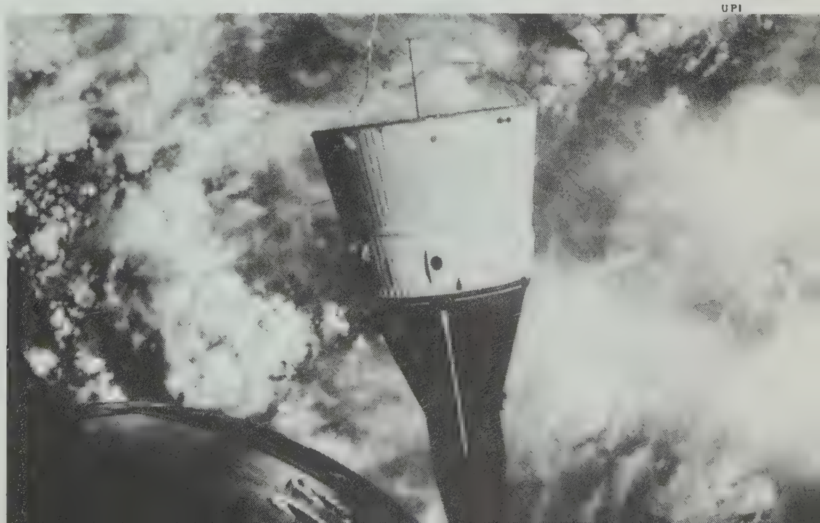
- Bill ending press censorship is approved by Generalissimo Francisco Franco for final approval by Cortes, **Aug. 13**
- Government restricts university students' activities because of riots in February and March at Madrid and Barcelona universities, **Sept. 2–3**

SPORTS

- Michigan defeats Oregon State, 34–7 in Rose Bowl, **Jan. 1**
- Boston Celtics close season with record 62nd victory, and win professional basketball title for seventh consecutive year, **March 21**
- Lucky Debonair wins Kentucky Derby, beating Dapper Dan by a neck, at Louisville, Ky., **May 2**
- Cassius Clay (Muhammad Ali) retains heavyweight boxing championship by knocking out Sonny Liston in one minute, in Lewiston, Me., **May 25**
- Michel Jazy, of France, lowers world mile track record to 3:53.6 in Rennes, France, **June 9**
- Gary Player, of South Africa, wins U.S. Open golf championship in St. Louis, Mo., **June 21**
- Casey Stengel, New York Mets manager, retires from baseball at 75 because of broken hip, **Aug. 30**
- Los Angeles Dodgers win World Series, defeating Minnesota Twins, 2–0, in seventh game, as Sandy Koufax pitches second shutout of series, **Oct. 14**
- Gen. William D. Eckert is named commissioner of baseball, succeeding Ford C. Frick, **Nov. 17**
- Green Bay Packers defeat Baltimore Colts, 13–10, to win Western Conference title in National Football League

UPI

SPACE EXPLORATION: Astronaut Edward H. White floats "upside down" in space, June 3, on Gemini 4 flight with James A. McDivitt. White became first U.S. "space-walker."



UPI

SPACE EXPLORATION: Gemini 6 (nose visible in foreground) moves toward rendezvous with Gemini 7 on Dec. 15. The two spacecraft maneuvered near each other during flight.

SOVFOTO

USSR: In Moscow's Red Square, in November, during the annual parade celebrating Russia's socialist revolution, the Soviet Union unveils a new orbital rocket with a warhead which it claims can attack any target, on command and from any point in its orbit.

(paving way to win league championship over Cleveland Browns on Jan. 2, 1966), in Green Bay, Wis., **Dec. 26**

Buffalo Bills defeat San Diego Chargers, 23–0, to win American Football League championship, in San Diego, Calif., **Dec. 26**

Australian tennis teams wins Davis Cup by defeating Spain, 4–1, in Sydney, Australia, **Dec. 26–28**

STEVENSON, Adlai E.

U.S. ambassador to the United Nations and presidential nominee of the Democratic party in 1952 and 1956 dies in London of a heart attack at the age of 65, **July 14**

STEWART, Michael—See GREAT BRITAIN

SUDAN

Right-wing Umma Party wins plurality in elections for constituent assembly; election is boycotted by southern parties seeking local autonomy; 14 are killed in election-day rioting, **Apr. 21**

Assembly chooses Foreign Minister Mohammed Ahmed Mahgoub of Umma Party to form new government; Mahgoub forms coalition cabinet with National Unionist Party, **June 10**

Heavy fighting is reported between government troops and southern separatist guerrillas; government charges Congo is aiding rebels, **July 13**

SUKARNO—See INDONESIA

SUPREME COURT

Refuses to review appeals court decision that the Constitution, while prohibiting segregation, does not dictate school integration, **March 1**

Rules that the secretary of state has authority to refuse passports to U.S. citizens to travel to certain areas such as Cuba, **May 3**

Overthrows conviction of Texas financier Billie Sol Estes because his trial was televised, **June 7**

Strikes down Connecticut birth-control law, establishing new constitutional "right of privacy," **June 7**

Abe Fortas is appointed to succeed Arthur J. Goldberg as associate justice, **July 28**

Rules unanimously that individuals may invoke constitutional privileges against self-incrimination and refuse to register as members of Communist party, **Nov. 15**

SYRIA

Syrian and Israeli forces clash at Galilee border; UN truce observers stop battle, **Aug. 12**

Baath Party establishes a National Council to serve as a provisional legislature, **Aug. 23**

Youssef Zayyen replaces Gen. Amin el-Hafez as premier; el-Hafez remains head of presidency council, **Sept. 23**

Zayyen is forced to resign following rumors of an abortive coup against President el-Hafez by Baathist officers with close ties to the Zayyen government, **Dec. 21**

TAIWAN—See CHINA, NATIONALIST

TANZANIA

National Assembly approves bill establishing a one-party state, **July 5**

Julius Nyerere, the only candidate, is reelected for five-year presidential term, **Sept. 21**

Severs relations with Britain because of latter's failure to crush Rhodesian rebellion, **Dec. 15**

TAYLOR, Gen. Maxwell

Resigns as U.S. ambassador to South Vietnam, and is replaced by former ambassador Henry Cabot Lodge, **July 8**

THANT, U

UN secretary general travels to India and Pakistan, and in separate talks with India's Prime Minister Shastri and Pakistan's President Mohammed Ayub Khan seeks to avert all-out war over Kashmir, **Sept. 7–16**

UN secretary general asks Security Council to order Pakistan and India to stop war under threat of sanctions, including military intervention, **Sept. 17**

Tells General Assembly that all countries, including Communist China, should be represented in United Nations, **Sept. 21**

New York *Times* reveals that Hanoi regime has rejected his peace overtures on Vietnam, **Dec. 2**

TUNISIA

President Habib Bourguiba proposes settlement of Arab-Israeli conflict on the basis of 1948 UN plan; is denounced as "traitor" by UAR President Nasser and other Arab leaders, **Apr. 21**

Bourguiba boycotts Arab League summit meeting, protesting Nasser's attempts to achieve "hegemony" over all Arab states, **Sept. 13–17**

TURKEY—See also CYPRUS

Premier Ismet Inönü and his government resign after losing vote of confidence on budget proposals, **Feb. 13**

President Cemal Gürsel appoints Sen. Suat Hayri Ürgüplü, a political neutral, premier of provisional government, **Feb. 16**

Suleyman Demirel, Justice party leader, becomes premier after victory of his party in Oct. 10 elections, **Oct. 27**

UNION OF SOVIET SOCIALIST REPUBLICS—See also KOSYGIN

National Economic Council announces plan to convert 400 consumer-goods factories from production-quota system to a profit system based on sales, **Jan. 13**

Soviet Academy of Sciences announces dismissal of controversial biologist Trofim D. Lysenko as director of its Institute of Genetics, **Feb. 3**

U.S. embassy is Moscow is stoned and damaged by 2,000 demonstrators, led by North Vietnamese and Chinese Communist students, protesting American military actions in Vietnam; Ambassador Foy D. Kohler protests "inadequate protection" at Foreign Ministry, **Feb. 9.**

Government announces that it will adhere to international patents agreement, **Mar. 16**

Voskhod 2, two-man spacecraft, orbits earth 17 times; astronaut Aleksei A. Leonov leaves craft and becomes first man to float in space, **Mar. 18–19**

Communist First Secretary Leonid I. Brezhnev announces removal of Leonid F. Ilyichev as head of Ideological Commission and his appointment to Foreign Ministry, **Mar. 23**

Delegation to Warsaw, Poland, headed by Premier Kosygin and Brezhnev, signs new Polish-Soviet treaty of friendship, **Apr. 9**

Kosygin announces that new five-year plan will emphasize consumer goods, **Apr. 19**

Soviet press publishes pictures of far side of moon taken by spacecraft Zond 3 on July 20, **Aug. 16**

Appeals to India and Pakistan for cease-fire and offers good offices in settling Kashmir dispute, **Sept. 7**

Government approves wide reforms providing for economic decentralization and use of profits to improve economic efficiency, **Sept. 28**

Brezhnev assumes seat in 16-member Presidium of Supreme

Soviet; his government post apparently facilitates his contacts with foreign leaders, **Oct. 2**

Anastas I. Mikoyan resigns as chairman of Presidium of Supreme Soviet and is succeeded by Nikolai V. Podgorny, **Dec. 9**

UNITED ARAB REPUBLIC

President Gamal Abdel Nasser is elected to third six-year term in presidential plebiscite, **Mar. 15**

Withdraws ambassador from Tunisia after Tunisian President Habib Bourguiba proposes Arab-Israeli negotiations, **Apr. 27**

Signs new agreement with Saudi Arabia for nonintervention in Yemen, **Aug. 24**

UNITED KINGDOM—See GREAT BRITAIN

UNITED NATIONS

UN General Assembly reconvenes its 19th session; Assembly President Alex Quaison-Sackey says body should return to normal voting procedures, **Jan. 18**

Indonesia formally withdraws from United Nations because of seating of Malaysia on Security Council, **Jan. 21**

General Assembly adjourns 19th session after U.S. and USSR join in defeating Albania's attempt to force showdown on question of unpaid assessments, **Feb. 18**

Security Council adopts resolution (7–0 with 4 abstentions) requesting Britain to prevent unilateral declaration of independence by Rhodesia, **May 6**

Security Council unanimously adopts resolution calling on Portugal to prevent violations of Senegal's sovereignty by incursions from Portuguese Guinea, **May 19**

Security Council rejects Soviet resolution to condemn U.S. action in Dominican Republic and to recall foreign troops, **May 21**

Delegates of 113 member nations meet in San Francisco for 20th anniversary celebration, **June 25–26**

President Johnson appoints Supreme Court Justice Arthur J. Goldberg to succeed Adlai E. Stevenson (who died July 14) as U.S. ambassador to the UN, **July 20**

Ambassador Goldberg announces that the U.S. will no longer insist on application of Article 19 of Charter depriving nonpaying members of vote in General Assembly, **Aug. 16**

Charter is amended to enlarge Security Council from 11 to 15 members and Economic and Social Council from 18 to 27, so that more of the newer nations might be represented, **Aug. 31**

Security Council unanimously approves resolution demanding that India and Pakistan end their border war in Kashmir, **Sept. 4**

Secretary General U Thant leaves India after having talked with Indian Prime Minister Shastri and Pakistani President Ayub Khan (in Pakistan) on ways to end war over Kashmir, **Sept. 15**

General Assembly opens 20th session under normal voting rules; Amintore Fanfani of Italy is elected Assembly president; Singapore, Gambia, and the Maldive Islands are admitted to membership, bringing total to 117 nations, **Sept. 21**

UN military observers are sent to India and Pakistan, after both nations accept cease-fire requested (Sept. 20) by Security Council, **Sept. 22**

Pope Paul VI addresses General Assembly in plea for world peace, **Oct. 4**

General Assembly approves Afro-Asian resolution urging Britain to prevent Rhodesian independence, **Oct. 12**

Assembly refuses to admit Communist China by vote of 47–47 (with 20 abstentions), **Nov. 17**

Seven nations—Argentina, Bulgaria, Japan, Mali, New Zealand, Nigeria, and Uganda—are elected by Assembly to seats on expanded Security Council, **Dec. 10**

Delegations of 24 African countries walk out of General Assembly before British Prime Minister Wilson asks for UN support of sanctions against Rhodesia, **Dec. 16**

UNITED STATES—For domestic events, see also such headings as ATOMIC ENERGY; CIVIL RIGHTS; JOHNSON; LABOR; SPACE EXPLORATION; SUPREME COURT; and individual states. For foreign affairs, see also such headings as JOHNSON; MCNAMARA; RUSK.

DOMESTIC EVENTS

89th Congress convenes with 295 Democrats and 140 Republicans in House of Representatives, 68 Democrats and 32 Republicans in Senate; House Republicans choose Gerald R. Ford, Jr., of Michigan to succeed Charles A. Halleck of Indiana as minority leader, **Jan. 4**

About 3,200 Negro and white civil rights workers make 54-mile "Freedom March" from Selma to Montgomery, Ala., protected by troops, **March 21–25**

Virgil I. Grissom and John W. Young maneuver the Gemini 3 spacecraft during successful three-orbit flight, **March 23**

Tornadoes sweep 6 Midwest states, killing 242 persons and injuring about 2,500 others, **April 11**

Senate liberals are defeated (49–45) in effort to pass poll tax amendment to voting rights bill, **May 11**

National "teach-in" debate on U.S. Vietnam policy is heard by more than 100,000 persons on 100 colleges campuses by means of special radio hookups, **May 15**

UNITED NATIONS: In unprecedented visit to United Nations on October 4, Pope Paul VI makes special appeal for world peace in address to General Assembly. The pontiff said that peace "must guide the destinies of all peoples and of all mankind."

UNITED NATIONS

UNITED STATES: President and Mrs. Johnson and Vice President and Mrs. Humphrey make an appearance at the National Guard Armory in Washington D.C., the scene of one of several inaugural balls held on January 18.

PICTORIAL PARADE

James A. McDivitt and Edward H. White II make successful 62-orbit 4-day flight in Gemini 4; White takes a record-breaking "walk" in space, **June 3–7**

President Johnson signs bill providing for $4.6 billion cut in federal excise taxes, **June 21**

Senate, by vote of 68–5, completes congressional approval of proposed constitutional amendment establishing procedure for vice president to become acting president in case of presidential disability, and for filling vacancy in vice presidency, **July 6**

Leroy G. Cooper, Jr., and Charles Conrad, Jr., ride in Gemini 5 for an 8-day, 120-orbit flight that breaks previous flight-duration records, **Aug. 21–29**

President Johnson signs coinage bill that permits new dimes and quarters to be produced without silver, and reduces the silver content of half dollars, **July 23**

President Johnson signs Medicare bill providing medical care for aged under Social Security System, **July 30**

Voting Rights Act of 1965, passed by Senate (79–18) on Aug. 4, is signed by President Johnson in Capitol ceremony, **Aug. 6**

Negroes riot in Watts section of Los Angeles, Calif.; National Guard is called in to contain rioting; 34 persons are killed and 1,032 injured, **Aug. 11–16**

Congress approves new cabinet-level Department of Housing and Urban Affairs, **Aug. 31**

President Johnson signs bill creating National Foundation on the Arts and the Humanities, **Sept. 29**

UNITED STATES: In Washington, D.C., demonstrators from several states carry antiwar placards during their "March on Washington for Peace in Vietnam," November 27.

DIANA J. DAVIES—NANCY PALMER

Stop the Bombi
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BRING GI's H NOW
TH AGAINST WAR & FASCISM
BRING THE GI's HOME NOW
YOUTH AGAINST WAR & FASCISM
BRING THE GI's HOME NOW
YOUTH AGAINST WAR & FASCISM

Thousands of marchers protest U.S. policy in Vietnam; violence breaks out in several cities, **Oct. 16**

Congress gives final approval to $2.3 billion Higher Education Act providing first federal scholarships, **Oct. 20**

Supporters of U.S. Vietnamese policy conduct series of marches and rallies to counter October 16 demonstrations, **Oct. 21–30**

89th Congress adjourns after having approved such major legislation as Medicare and Voting Rights Act, **Oct. 23**

Massive power failure blacks out parts of northeast U.S. and Ontario Province, Canada, for as much as 12 hours; President Johnson orders Federal Power Commission inquiry, **Nov. 9**

Gemini 7 spacecraft, manned by Air Force Lt. Col. Frank Borman and Navy Comdr. James Lovell, Jr., makes 14-day orbital flight; Gemini 6, manned by Navy Capt. Walter M. Schirra, Jr., and Air Force Lt. Col. Thomas P. Stafford, goes into orbit and effects rendezvous with Gemini 7 on Dec. 15, returning to earth on Dec. 16; Gemini 7 makes 206 orbits in 330 hours, 31 minutes, lands on Dec. 18, having traveled 5.1 million miles, **Dec. 4–18**

FOREIGN AFFAIRS

United States begins air strikes against North Vietnam as President Johnson orders U.S. dependents evacuated from South Vietnam, **Feb. 7**

President Johnson, in speech at Johns Hopkins University, offers to begin unconditional peace negotiations in Vietnam providing for South Vietnamese independence; proposes $1 billion Southeast Asia development program, **April 7**

President Johnson sends U.S. Marines to Dominican Republic to protect and evacuate Americans caught in revolution, **April 28**

Senate passes special $700 million appropriation bill to finance expanding U.S. operations in Vietnam, **May 6**

President Johnson orders resumption of air raids on North Vietnam after six-day suspension brings no reaction from Hanoi, **May 18**

President Johnson ends suspension of food aid to United Arab Republic after six months of "improved relations," **June 22**

State Department announces recognition of new Algerian government of Col. Houari Boumedienne, **July 6**

President Johnson announces increase in U.S. military strength in Vietnam to 125,000 men, **July 28**

Pledges $20 million to aid Dominican Republic and promises full support to new regime, **Sept. 4**

Negotiates new Panama Canal Treaty with Panama that recognizes Panama's sovereignty over Canal Zone, **Sept. 24**

Reaches agreement with Cuba on airlift of Cubans wishing to migrate to United States, **Nov. 6**

Rejects request from Ghana for $127 million in surplus food, in protest against Ghana's anti-American policies, **Nov. 23**

APPOINTMENTS AND RESIGNATIONS

President Johnson names Nicholas deB. Katzenbach as U.S. attorney general, **Jan. 28**

President Johnson appoints Thomas C. Mann undersecretary of state for economic affairs, succeeding W. Averell Harriman as No. 3 man in State Department, **Feb. 13**

VIETNAM: A United States Marine, in the middle of the fighting in the Vietnamese war, carries two frightened young orphans across a muddy stream to temporary safety.

UPI

- Henry H. Fowler, former undersecretary of the Treasury, is appointed secretary of the Treasury to succeed Douglas Dillon, **March 18**
- Adm. William F. Raborn is appointed director of Central Intelligence Agency (CIA), succeeding John A. McCone, **April 11**
- Kermit Gordon resigns as director of Bureau of the Budget; Charles L. Schultze is named to succeed him, **April 20**
- Franklin D. Roosevelt, Jr., is named chairman of Equal Employment Opportunity Commission, new agency authorized by Civil Rights Act of 1964, **May 10**
- Marshall Green, deputy assistant secretary for Far Eastern affairs, is named ambassador to Indonesia, **May 14**
- Army Lt. Gen. Marshall Carter is appointed director of National Security Agency, May 16
- Mrs. Patricia R. Harris is named ambassador to Luxembourg, succeeding William R. Rivkin, **May 19**
- Stephen Ailes resigns as secretary of the Army; Stanley R. Resor is named his successor, **June 17**
- Thomas K. Finletter resigns as ambassador to NATO and is succeeded by Harlan Cleveland, assistant secretary of state for international organization affairs, **July 1**
- Gen. Maxwell Taylor resigns as ambassador to South Vietnam; Henry Cabot Lodge is named to the post, **July 8**
- Eugene M. Zuckert resigns as secretary of the Air Force; Dr. Harold Brown is named his successor, **July 10**
- President Johnson names Judge Thurgood Marshall as U.S. solicitor general, **July 13**
- Leonard H. Marks is named to succeed Carl T. Rowan as director of U.S. Information Agency (USIA), **July 13**
- President Johnson names Supreme Court Justice Arthur J. Goldberg to succeed Adlai E. Stevenson as U.S. ambassador to United Nations, **July 20**
- Anthony J. Celebrezze resigns as secretary of health, education, and welfare; John W. Gardner is named his successor, **July 27**
- Abe Fortas is named to succeed Arthur J. Goldberg as associate justice of Supreme Court, **July 28**
- NBC White House correspondent John Chancellor is appointed to head Voice of America, **July 23**
- Presidential assistant Lawrence F. O'Brien is named postmaster general to succeed John A. Gronouski, who is named ambassador to Poland, **Aug. 29**
- Dr. William H. Stewart is named surgeon general, succeeding Dr. Luther Terry, **Sept. 24**
- McGeorge Bundy, special assistant to President Johnson for national security affairs, resigns (effective Feb. 28, 1966) to become president of Ford Foundation, **Dec. 8**
- President Johnson appoints Harold Howe, 2nd, as U.S. commissioner of education, succeeding Francis Keppel, **Dec. 18**

UPPER VOLTA

- On visit to U.S., President Maurice Yaméogo attacks Ghana's President Kwame Nkrumah for sending "subversives" into neighboring countries, **Mar. 29**
- President Yaméogo reelected for second 5-year term, **Oct. 3**

URUGUAY

- President Washington Beltrán announces austerity program to stem worst inflation in country's history; calls for abolition of ineffective nine-man National Council and return to presidential system, **June 12**
- Government declares a state of siege after public employees call a mass strike, **Oct. 7**

VATICAN—See Roman Catholic Church

VENEZUELA

- President Raúl Leoni announces four-year plan to reduce illiteracy and to increase production, **March 11**
- Government announces arrest of three agents of Italian Communist party bringing $300,000 into country, **April 12**

VIETNAM

- Armed Forces Council seizes power and names Nguyen Xuan Oanh as premier of civilian caretaker government, **Jan. 27-28**
- U.S. planes begin regular attacks on targets in North Vietnam; bomb Donghoi military base in retaliation for Vietcong ground attack on U.S. airbase at Pleiku, **Feb. 7**
- Armed Forces Council appoints Phan Huy Quat as premier and Phan Khac Suu as chief of state, **Feb. 15**
- Council dismisses Gen. Nguyen Khanh and names Tran Van Minh acting commander of armed forces, **Feb. 21**
- Terrorist bomb wrecks U.S. embassy in Saigon, **Mar. 30**
- Two U.S. jets are shot down by MIG fighters over North Vietnam in first clash between U.S. and Communist planes, **Apr. 4**
- U.S. resumes air attacks on North Vietnam after six-day suspension failed to produce peace overtures from Hanoi, **May 18**
- Suu, Quat, and National Legislative Council resign and turn over power to military leaders, **June 12**
- Air Vice Marshal Nguyen Cao Ky becomes premier, **June 19**
- Henry Cabot Lodge is named U.S. ambassador to South Vietnam, replacing Gen. Maxwell Taylor, **July 8**
- North Vietnamese President Ho Chi Minh vows that his people will fight 20 years or longer to achieve victory in all of Vietnam, **July 20**
- U.S. bombers launch first attack on missile installations in North Vietnam, **July 27**
- In retaliation for South Vietnam's execution of three Vietcong agents (Sept. 23), Vietcong execute two U.S. prisoners of war, **Sept. 26**
- North Vietnam announces that captured U.S. pilots will be tried as war criminals, **Sept. 29**
- U.S. forces suffer heaviest casualties of the war during the week ending Nov. 20—240 dead, mostly in Iadrang Valley battle against the north Vietnamese, (announced) **Nov. 24**
- U.S. fighter bombers destroy North Vietnamese power plant near the port of Haiphong—the first air raid on a major industrial target, **Dec. 15**
- U.S. suspends bombing raids on North Vietnam and begins a major "peace offensive," dispatching high-ranking emissaries to various capitals of the world to sound out possibilities of achieving peace in Vietnam, **Dec. 24**
- Fighting in South Vietnam is largely suspended during 30-hour Christmas truce, **Dec. 24–25**
- U.S. announces casualties during 1965 fighting as follows: Americans—1,350 killed, 5,300 wounded, 147 missing or captured; South Vietnamese—11,100 killed, 22,600 wounded, 7,400 missing; Vietcong—34,585 killed, 5,746 captured, as of **Dec. 31**

VIRGINIA

- Democrat Mills E. Godwin, Jr., is elected governor, but the Republican candidate, A. Linwood Holton, makes strong showing, **Nov. 2**
- Senator Harry F. Byrd, Sr., resigns from the U.S. Senate after serving 32 years; his son, Harry F. Byrd, Jr., is appointed to succeed him, **Nov. 11, 12**

WALLACE, Henry A.

- U.S. vice president (1941–45), secretary of agriculture (1933–40), and plant biologist dies at Danbury, Conn., **Nov. 18**

WASHINGTON (District of Columbia)

- House of Representatives kills Senate-approved bill to allow residents of the district to elect their own mayor and city council, **Sept. 29**

WILSON, Harold

- British prime minister, during three-day visit to West Germany, says that Britain will maintain present troop strength in Berlin, **Mar. 6**
- Has audience with Pope Paul VI during visit to Rome to meet with Italian leaders, **Apr. 27–29**
- In meeting in London, rejects demands by Rhodesian Prime Minister Ian Smith for Rhodesia's immediate independence under circumstances permitting permanent rule by the white minority, **Oct. 4–8**
- Agrees with Prime Minister Smith, during conferences in Salisbury, Rhodesia, to establish a royal commission to study Rhodesian independence, **Oct. 25–30**
- Calls Rhodesia's declaration of independence an "illegal act and one which is ineffective in law," **Nov. 11**
- Addressing UN General Assembly, demands that UN support Britain's economic and financial sanctions against Rhodesia; confers in Washington with President Johnson, **Dec. 16–17**

YEMEN

- Hasan al-Amri is named to replace Hamoud al-Jaifi as premier on latter's resignation, **Jan. 5**
- Premier al-Amri resigns; Ahmad Muhammad Numan is appointed to succeed him; new 6-man presidency council reduces power of president Abdallah al-Sallal, **Apr. 21**
- Premier Numan resigns over differences with President al-Sallal, **July 1**
- Al-Amri is reappointed premier, **July 20**
- Royalist and republican delegates end two-week conference at Taif and agree on program to end three-year civil war, **Aug. 13**
- United Arab Republic and Saudi Arabia sign new nonintervention pact and peace plan for Yemen, **Aug. 24**

YUGOSLAVIA

- Communist Central Committee announces creation of four-man secretariat to conduct party affairs, **June 2**
- President Tito visits East Germany, Czechoslovakia, and USSR, **June 2–30**
- Mihajlo Mihajlov, sentenced in April to nine months' imprisonment for his anti-Soviet article, "Moscow Summer 1964," is freed by appellate court, **June 23**
- President Tito visits Bulgaria for first time in 18 years, Sept. 22–27

ZAMBIA

- President Kenneth Kaunda declares state of emergency following declaration of independence in Rhodesia; warns of border buildup, Nov. 11
- Kaunda requests Britain to send troops to protect Zambia-Rhodesia border and Kariba Dam, **Nov. 27–28**
- British-U.S. airlift of oil to Zambia begins, **Dec. 19–20**

UPI

THE AMERICANA ANNUAL

UPI

REVIEW OF THE YEAR

PIX

ACCIDENTS

More Americans were killed in accidents during 1964 than in all battles of the Korean War, World War I, the Spanish American War, the Mexican War, the War of 1812, and the Revolutionary War. Accidents remained the fourth leading cause of death in the nation, exceeded only by heart disease, cancer, and vascular lesions. For the population group between the ages of 1 and 37, accidents were the greatest cause of death.

Accidents in the United States. Accidental deaths in the United States during the first 10 months of 1965 totaled about 87,400, 1% more than in the same period of 1964. Motor vehicle accidents were up 2%, and public nonmotor vehicle accidents were up 4%. Work accidents were down 1%, and accidental deaths in the home decreased less than 1%.

A record 49,000 deaths from vehicle accidents may be reached in 1965, on the basis of rates established during the first 10 months of the year. The previous high, in 1964, was 47,700.

In 1964, accidents of all kinds took 105,000 lives in the United States—an increase of 4% over 1963. Accidents killed nearly 55 persons per 100,000 population—a slight increase over the 1963 rate of 53.4. In addition to fatal accidents, 10,200,000 persons were injured by accidental causes in 1964.

ACCIDENTAL DEATHS IN THE U.S., 1962–65

Year	Total[1]	Motor vehicle	Public nonmotor vehicle	Home	Work
1962	97,139	40,804	17,000	28,500	13,700
1963	100,669	43,564	17,000	29,000	14,200
1964	105,000	47,700	18,000	28,500	14,200
1964 (Jan.–Oct.)	86,300	39,050	15,400	22,900	11,800
1965 (Jan.–Oct.)	87,400	39,760	16,000	22,800	11,700

[1] Duplications between motor vehicle, work, and home accidents are eliminated in total. Deaths of military personnel are assigned to motor vehicle, public nonmotor vehicle, and home accidents, according to the type of accident. (Sources: National Vital Statistics Division and National Safety Council.)

During 1964, accidental deaths occurring in the home, at work, and in public places (excluding motor vehicle accidents) were attributed primarily to the following causes: falls (19,100); fires and burns (7,700); drownings (6,700); poisoning (3,600); railroad accidents (2,600); and accidents involving firearms (2,400).

Costs. Accidental death and injury cost the United States an estimated $16.7 billion in 1964. These costs included wage losses, medical fees, hospital expenses, insurance overhead costs, damaged or destroyed property, and lost production. It was estimated that since 1913, when the National Safety Council was founded, organized safety efforts in the United States have saved more than 1.1 million American lives.

Canada. Canada reported 10,255 accidental deaths in 1963 (the latest year for which complete figures were available). The death rate per 100,000 population was 54.3—the same as the 1962 rate. Motor vehicle accidents claimed 4,451 lives in Canada in 1963—more than any other accidental cause of death—followed by falls (1,564), drownings (1,130), burns (584), railroad accidents (249), and poisoning by gas (147).

Howard Pyle
President, National Safety Council

ADEN. See Arabia.

ADVERTISING

Advertising again expanded with the economy in 1965. Expenditures by advertisers in all kinds of media in the United States increased 5.5%, to reach a record total of $14.94 billion. National advertisers spent $9.22 billion, or 6% more than in 1964. Local advertisers spent $5.72 billion—an increase of 5% over 1964.

Expenditures and Revenues. According to data compiled by McCann-Erickson, Inc., for the magazine *Printers' Ink*, all media except newspapers chalked up an increase in advertising volume. Expenditures by national advertisers in newspapers totaled $850 million, just matching the figure for 1964.

The greatest gain—9%—was shown by magazines, which received $1.2 billion in advertising revenue in 1965. This was the first year since television became a major medium that another medium registered a larger gain. National and spot television, however, did show the second-largest increase—7.5% —to reach a total of $2.05 billion. Other media recorded the following expenditures by national advertisers: network and spot radio, $305 million (up 1%), business papers, $675 million (up 8%), and billboards, $120 million (up 3%).

Advertising Agencies. Advertising is not only entrenched as a function of business, but is also a big business itself. The owners of the Grey Advertising Agency sold 23.6% of the agency's stock to the public for $5,655,000. Each of four principal sellers received more than $700,000 for the shares he sold. The three other major agencies that have issued stock to the public had financially successful years. As a result of these developments, agency stock is attractive to the public, and the sale of agency stock has become an interesting possibility for the owners.

The merger trend among agencies continued. The biggest merger of the year combined Batten, Barton, Durstine & Osborn with Clyne Maxon.

In the past, agencies have been paid a 15% commission by the media on the cost of the advertising space or air time they buy. In recent years, however, increasing numbers of clients have asked for rebates on their commissions and have paid their agencies on a fee basis for work performed. The American Tobacco Co., which switched to the fee system in 1965, disclosed at year's end that it had saved $1,400,000.

Government Regulation. Congress passed a law requiring a health warning on cigarette packages beginning in 1966. In an effort to ward off a requirement for similar warnings in cigarette advertising, the tobacco industry adopted self-regulatory policies banning advertisements that might encourage young people to smoke. Congress also passed an anti-billboard measure granting a bonus in federal funds to states that prohibit billboards along federal-aid highways. Also, the Federal Communications Commission warned broadcasters to reduce the volume of sound of television and radio commercials.

Fraud. Blatantly deceptive advertising was rarer in 1965 than in the past, but a landmark case was concluded when the Kastor, Hilton, Chesley, Clifford & Atherton agency was fined $50,000 for its role in the allegedly deceptive advertising during 1956–63 for Regimen "reducing" tablets. In the past, courts have tended to act only against advertisers and to ignore the agency's role.

Walter Joyce
Editor, "Printers' Ink."

AERONAUTICS
U.S. AIR FORCE
T SERVICE

UPI

LOCKHEED'S C-5A, a troop carrier shown in the wooden mockup stage, will be the world's biggest plane.

AERONAUTICS

Aeronautics was highlighted in 1965 by a heavy reliance on airpower in the war in Vietnam; by the decision of the United States to build the world's largest aircraft, the C-5A troop carrier; and by substantial increases in commercial airline mileage and revenue in the United States.

MILITARY AVIATION

The United States developed and successfully used unusual techniques in air warfare to meet the special demands of the struggle in Vietnam. The U.S. arsenal of airborne equipment ranged from armed helicopters to giant B-52 bombers. The latter were designed to carry nuclear weapons to distant targets, but in Vietnam they were deployed for lesser tasks in a limited war. During the year the use of American air power grew in scope in Vietnam as the United States accelerated its war effort.

Air Power in Vietnam. More armed helicopters were used in Vietnam than in any previous conflict, and the number increased substantially when the 1st Cavalry Division (Airmobile) arrived in the combat zone in the late summer of 1965. New procedures were developed by which helicopters can transport troops to fight small bands of Communist guerrillas and carry out rescue and evacuation operations from battle scenes.

The B-52's, based in Guam, were called on to drop conventional bombs on tactical targets in Vietnam, 2,800 miles away. Able to fly in bad weather and perform with great accuracy, the long-range B-52's were used advantageously in jungle warfare by quickly saturating targets with great numbers of small bombs.

SOVIET UNION'S AN-22, turboprop here displayed at an air show in Paris, can carry 700 passengers.

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АЭРОФЛОТ
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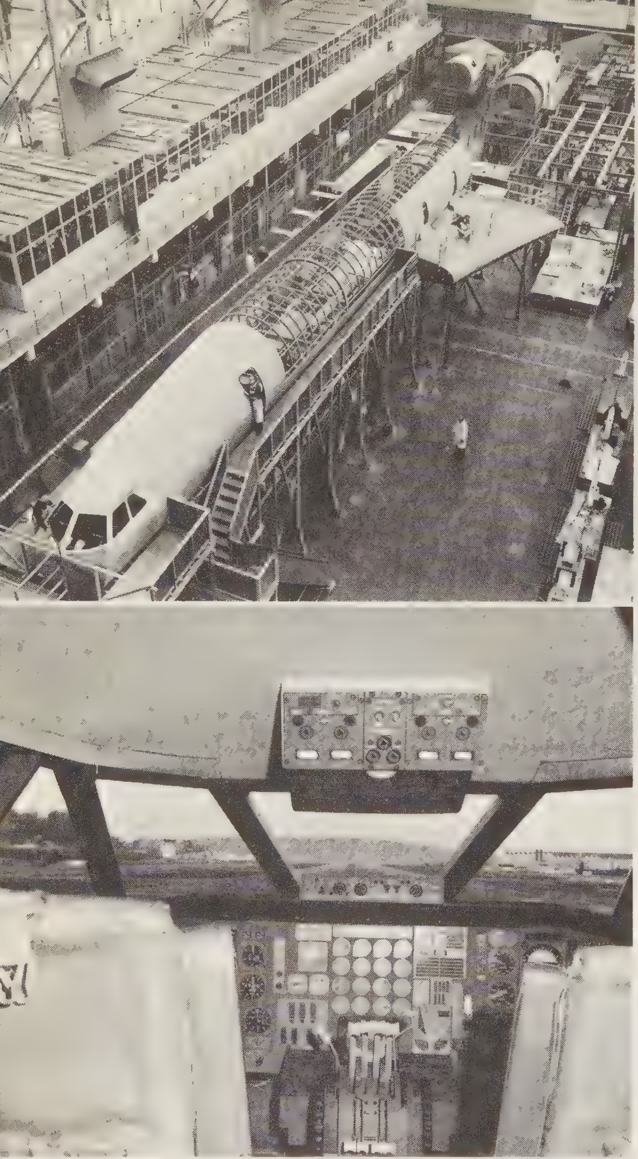


(TOP) BRITISH AIRCRAFT CORPORATION; (BOTTOM) BOEING

SUPERSONIC TRANSPORTS, scheduled to fly in the early 1970's, reached the mockup stage in 1965. Anglo-French designers built a Concorde fuselage (*upper photo*) in wood. A cockpit mockup of the Boeing SST (*lower photo*) permitted better runway visibility than in present subsonic jetliners.

The term "strategic persuasion" was introduced to denote the bombing by U.S. planes of military installations in North Vietnam. These bombings were carried out to try to induce the enemy to accept offers of peace negotiations. In line with this policy, the United States applied what its Air Force chief of staff called "a measured amount of strategic airpower."

In another tactical air maneuver developed in Vietnam, U.S. aircraft sprayed chemicals to defoliate forests, thus denying cover to the enemy. Conventional air strength was employed to cut guerrilla supply lines, spot enemy movements, observe artillery fire, and deliver firepower in direct support of troops.

C-5A. The Department of Defense awarded Lockheed Aircraft Corporation a $2 billion contract to build 58 C-5A troop carriers. This jet transport will carry any of three loads: 600 fully armed troops, 700 nonmilitary passengers, or 50 tons of cargo. The cavernous interior of the C-5A has enough room for six civilian-type buses or 16 ¾-ton trucks. Ten planes this size can carry loads equal to the total capacity of all the planes engaged in the famous Berlin airlift of 1948. The C-5A is an outgrowth of earlier concepts, and its development was hastened by world events that showed the necessity for having an immense airlift capacity.

General Electric will make the C-5A's four jet engines, each of which will generate 40,000 pounds of thrust. The gross weight of the plane will be about 700,000 pounds, and the top speed will be about 550 mph. With a length of 230 feet and a wing span of 220 feet, the C-5A will be more than twice as large as any current U.S. military transport, and larger than the USSR's new AN-22 transport. The Department of Defense placed the C-5A order in September, and expects deliveries to begin in 1969.

C-141. The Lockheed C-141 Starlifter, capable of carrying one third the cargo of the C-5A, was placed in service in 1965. The C-141 represented major advances over existing aircraft. The Pentagon reduced its C-141 order when it announced the C-5A award but later restored the full order.

Manned Bomber. Development of a completely new manned bomber was discussed but appeared remote after Secretary of Defense Robert S. McNamara announced in December 1965 that the Air Force would use a bomber version of the F-111 tri-service fighter (originally the TFX). The government planned to order 210 of the aircraft at a cost of $1.7 billion. The bomber, designated the FB-111, will be able to fly from 5,000 to 6,000 miles at speeds near 1,300 mph. Deliveries will start in 1968 and continue through 1971.

Meanwhile, the Department of Defense acted to modify its present global manned bomber, the B-52, to extend its lifetime. Research and development was pushed in 1965 on new avionic (aviation electronic) components for the B-52, and bids were invited for a two-year contract to develop a new propulsion system.

The Pentagon announced that it would eliminate all B-58's from the manned bomber force and cut back its B-52's by 1971, when the new FB-111's would be in operation.

F-111. The F-111A, the Air Force's version of the tri-service fighter, was being tested, and it was forecast that the first F-111A's would go into service near the end of fiscal year 1967. The Air Force will spend about $7.6 billion for 1,500 of these jets. The F-111A, built by General Dynamics, is designed to reach speeds of up to 1,665 mph. It has variable sweep wings that extend almost straight out from the fuselage at low speeds, but sweep back sharply at higher speeds for faster, more efficient flight. In May 1965 the Navy rolled out its version of the tri-service fighter, the F-111B.

YF-12A and SR-71. The YF-12A, an interceptor, and the SR-71, a strategic reconnaissance plane, were tested in 1965. Both are mach 3 (three times the speed of sound) aircraft, derived from the A-11, which can sustain speeds of more than 2,000 mph and fly at altitudes of more than 70,000 feet.

No decision was reached to adopt the YF-12A, and indications were that it would not be developed after the Department of Defense elected to adapt the F-111 to a reconnaisance version, the RF-111. The SR-71 carries a crew of two and flies to 80,000 feet. Built by Lockheed, the SR-71 apparently outperforms Lockheed's U-2, the famed spy plane.

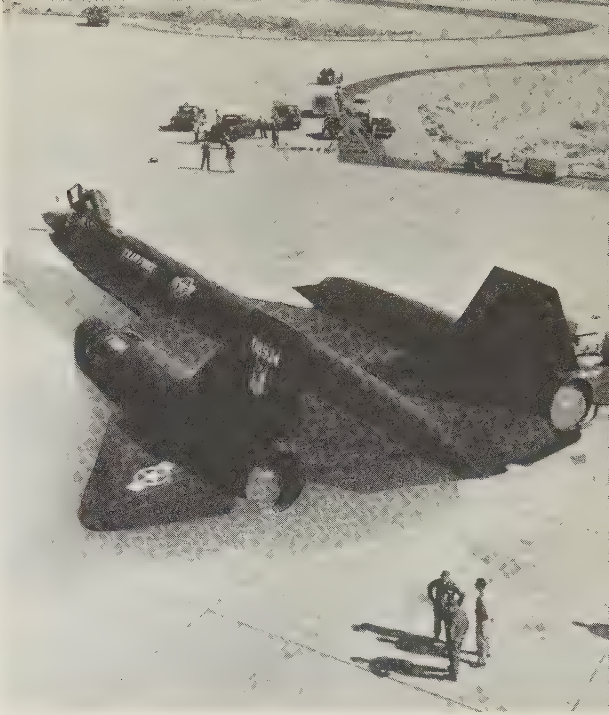
COIN. Spurred on by combat experience in Vietnam, the services searched for a mosquito-like counterinsurgency (COIN) aircraft. Toward this end, the Navy ordered the North American OV-10A, which in 1964 had won the Marines' light armed reconnaisance aircraft competition. The services also studied General Dynamics' Model 48 Charger and other COIN craft. According to service specifications, COIN craft should be twin-engine light planes that can provide air support in primitive areas. They must be capable of short takeoffs and landings, and should be readily adaptable to reconnaisance and transport purposes.

V/STOL. Intense research and development continued on vertical and short takeoff and landing (V/STOL) aircraft. The magnitude of the effort made it apparent that the services intend to adapt these planes to active military systems. V/STOL craft hold great promise because of their ability to hover at slow speed and then scoot away swiftly.

The largest of the vertical takeoff and landing (VTOL) craft, the Ling-Temco-Vought X-142A tilt-wing plane, made the full transition from hovering to conventional flight early in 1965, and by midyear the Air Force had started a 15-month test program. Tests also continued on the Ryan Aeronautical XV-5A lift fan, the Lockheed XV-4A Hummingbird, and the Hawker Siddeley XV-6A. The XV-6A was being developed jointly by the United States, Britain, and West Germany. Also undergoing tests were the X-19A, which has a twin turbine and four tandem tilted propellers, and the tilting-duct X-22.

The Air Force proposed a V/STOL assault transport, the CX-6, to be developed by the mid-1970's, that would use lift-fan engines to carry a 10-ton payload. Also in the Air Force plans was an advanced V/STOL strike support fighter that can attain a mach 2.2 speed at an altitude of 50,000 feet.

Helicopters. Helicopter development was spurred by the war requirements in Vietnam. The Army outlined plans for an Advanced Aerial Fire Support System, comprising armed escort craft that would carry much greater firepower than any previous helicopters. It will be built by Lockheed Aircraft. During 1965 the Bell Helicopter Company, the Boeing Company's Vertol Division, and Sikorsky Aircraft announced faster and more heavily armored versions of existing models.


LOCKHEED

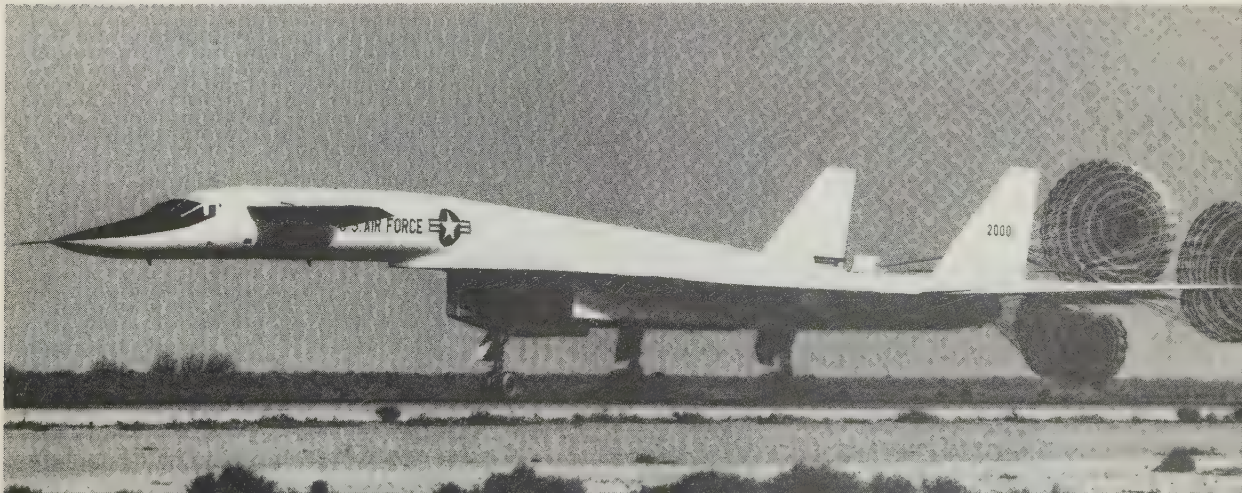
THE YF-12A, a 2,000-mph interceptor that can operate at 70,000-foot altitudes, was tested extensively in 1965.

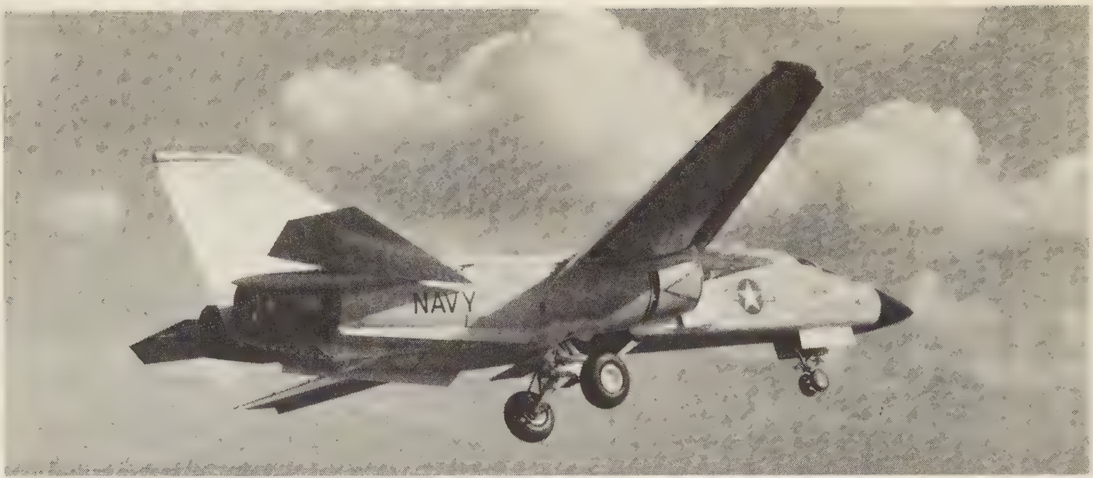
Other Planes. The experimental triangle-tailed XB-70 was being used by the Air Force to test certain advanced concepts, and by the National Aeronautics and Space Administration to carry out supersonic transport studies. Other advanced concepts, including ramjet flight, were being tested on the X-15, which has recorded a height of 67 miles and a speed of 4,104 mph. The Northrop F-5 Freedom Fighter, a supersonic bomber ordered for allies of the United States under its military assistance programs, was sent to Vietnam for combat operations to determine whether the United States should buy 200.

Air Force Programs. The Air Force sought funds for 517 aircraft during the 1966 fiscal year. The Air Force's active aircraft decreased from 15,380 on June 30, 1964, to 14,411 on June 30, 1965, and it was forecast that the Air Force would have 13,706 active aircraft on June 30, 1966. However, the escalation of the war in Vietnam assured an increase in the 1966 figure. The Air Force retained some F-100's, F-102's, and B-57's that it had planned to

THE XB-70A, built by North American for research, lands after a flight in which it topped 2,000 mph.

UPI





GRUMMAN AIRCRAFT

NAVY VERSION of the General Dynamics F-111B undergoes a flight test by Grumman, builder of the B model.

phase out of active duty. During 1965 the Air Force also acquired the RF-4C reconnaisance aircraft, the HC-130H helicopter, and the C-141 jet transport, and accumulated funds to buy the F-111, SR-71, Northrop T-38, and an advanced development and engineering version of the F-4. It slowed its purchases of the present F-4, however. To improve close-support operations, the Air Force evaluated the A-4, A-6, A-7A, and F-5. It also studied the concept of a close-support fighter to bridge the gap between the old propeller-driven planes and supersonic jets, and looked into such advanced concepts as the Scramjet (a supersonic combustion ramjet) and hypersonic propulsion for speeds over mach 3.

Army Programs. The Army had 6,338 aircraft on June 30, 1965, and its initial request for funds during fiscal year 1966 called for 1,018 more. However, as a result of the Vietnam warfare, supplemental appropriations were granted, adding greatly to the number of Army aircraft, especially helicopters, planned for 1966.

Meanwhile, the Army worked on outlining the major airborne and airmobile units to be included in its long-range aeronautics program. The general direction of this program was indicated when an experimental air assault division, using helicopters to support field troops, was formed into the 1st Cavalry Division (Airmobile) and assigned to Vietnam. The division goes into battle with 434 aircraft, almost all helicopters, compared with 101 aircraft in the standard Army division. The 1st Cavalry operated with UH-IB armed helicopters, UH-1D transport helicopters, CH-47A medium helicopters, and smaller observation helicopters—OH-13's, OH-23's, U-6's, and fixed-wing OV-1 Mohawks. The creation of additional airmobile divisions was announced later in 1965.

During fiscal year 1966 the Army also bought more UH-IB's, CH-47A's, OH-1 fixed-wing aircraft, and trainer planes. It selected the Hughes Tool Company's OH-6A as the winner of its light helicopter observation competition, and placed orders for more than 700 of these craft, to be delivered over the next three years.

NORTH AMERICAN'S OV-10A became the U.S. Navy's choice for use as a light counterinsurgency aircraft in Vietnam.

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Navy. The Navy and Marine Corps, with 8,391 aircraft on June 30, 1964, and 8,250 on June 30, 1965, sought authority to add 659 during the 1966 fiscal year.

The Navy set up a fund to buy probably from 1,000 to 1,500 of the A-7A light attack aircraft, designated as the Corsair II, and in November received the first deliveries. It also allotted funds for improved versions of the F-4, and created an initial large-scale fund for purchasing the F-111B, its version of the tri-service fighter.

Of existing aircraft, the Navy continued buying the P-3A Orion antisubmarine warfare (ASW) aircraft, the C-2A carrier delivery plane, the TA-4E and T-2 trainers, and the CH-46A, UH-46A, and CH-53A helicopters. It also stepped up orders for the A-6A and A-7A, but lowered its purchases of the SH-3D helicopter and the S-2E ASW craft, which is likely to be discontinued in fiscal 1966. Procurement of the E-2A was stretched out. More than 50 F-8 Crusaders were being reconverted for use in reconnaissance.

Looking toward the future, the Navy was designing the VSX for antisubmarine warfare, for which it also intended to use more helicopters.

Plans also were made for carriers to have an increased ratio of attack planes and more reconnaissance aircraft.

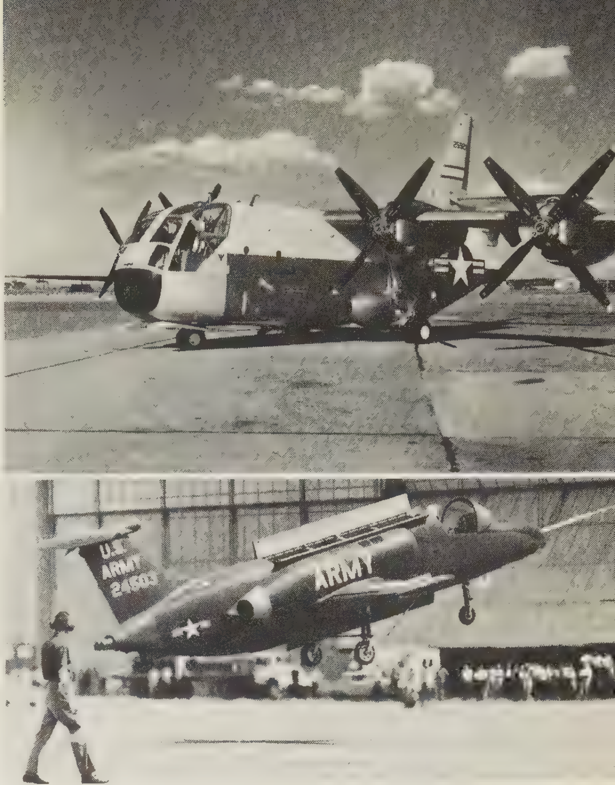
CIVIL AVIATION

Commercial airlines, private and business planes, air cargo transports, and airports all showed increased activity in 1965. Civil aircraft registered with the Federal Aviation Agency on Jan. 1, 1965, totaled 88,742 general craft and 2,193 planes in the commercial air fleet. On the same date, 431,041 pilots were registered with the FAA, an increase over the 378,700 registered in the previous year.

Supersonic Transport. Research continued in 1965 on a U.S. supersonic transport (SST). In July, President Johnson announced an 18-month, $220 million study contract under which parallel research would be conducted by two airframe manufacturers, Lockheed and Boeing, and by two engine manufacturers, General Electric and Pratt & Whitney. The research will continue until January 1967, when a decision will be made on whether to build test planes. The president said "much work must be done" before proceeding with construction, but critics felt that the SST project should move faster.

The schedule for producing a 2,000-mph SST in the United States had slipped behind the schedule for the competing but slower (1,500 mph) British-French SST, the Concorde. Estimates placed the Concorde's first flight in 1968 or 1969, and its certification for use in 1971. The timetable for the American SST suggests it will be certified in 1974 or 1975. The USSR indicated it will have its own supersonic transport flying before the Concorde.

Tests were run by the National Aeronautics and Space Administration on the feasibility of building a hypersonic aircraft with a speed of from 2,000 to 5,000 mph. This plane would be introduced in the 1970's.



(TOP) U.S. AIR FORCE; (BOTTOM) LOCKHEED

VERTICAL TAKEOFF CRAFT hold great military promise. Experimental craft include the Ling-Temco-Vought X-142A tilt-wing (*upper photo*) and the Lockheed XV-4A Hummingbird (*below*), shown hovering motionless just above a runway.

Aircraft Production. The combined production of civil and military aircraft in the United States in 1965 was estimated at 15,000. In the preceding year, the output totaled 10,053 civil craft and about 2,000 military craft.

U.S. commercial airlines increased their purchases in 1965, buying about 300 units worth a total of $1.5 billion. They ordered more 4-engine and 3-engine jets, and began receiving quantities of twin-engine jets for short hauls. Many local-service carriers added twin-turboprop equipment. United Air Lines announced the biggest single outlay for commercial aircraft—a record $375 million for 75 jetliners, all but nine ordered from Boeing. Boeing and Douglas announced that they would offer a new version of their standard airline aircraft that will accommodate 200 passengers. At the end of 1965, U.S. airlines owned approximately 850 pure jet aircraft.

Airports. There were 9,490 civil and joint civil-military airports in the United States at the beginning of 1965, an increase of 676 over 1964. The FAA allotted a record $84.5 million ($75 million plus carryover) for the construction and improvement of 445 airports in fiscal year 1966. The money was allotted mainly to airports used by

RUSSIAN MI-8, a twin-turbine helicopter shown flying at the Paris air show, carries 28 passengers.

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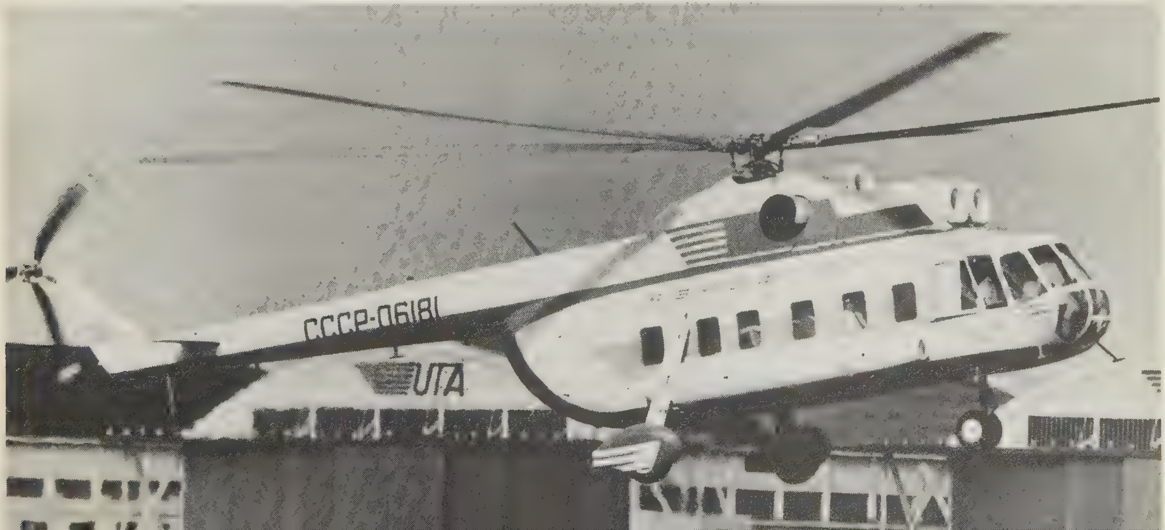

MOHAWK AIRLINES

DOUGLAS DC-9

DOUGLAS AIRCRAFT

SHORT-RANGE JETS joined the U.S. commercial air fleet in greater numbers in 1965. British Aircraft Corporation's 111 (*left*) and the Douglas DC-9 enabled regional airlines to supply jet service for flights as short as 200 miles.

commercial air-taxi operators or to general-aviation airports to relieve congestion at metropolitan airports.

Air Traffic Control. The FAA continued to expand its semiautomatic air traffic control system and planned to test the National Airspace System at Jacksonville, Fla., in 1967. Full modernization of air traffic control was scheduled for completion in 1970.

The FAA also announced that it would conduct one-year tests of two techniques using equipment that, for the first time, will give constant 3-dimensional radar pictures of air traffic—the Advanced Radar Traffic Control System (ARTS) and the Stored Program Alpha-Numerics (SPAN). In the tests, radar-return blips are electronically assigned descriptive luminous letters and numerals (alpha-numerics). These are grouped into tags (data blocks) that follow each radar blip across the controller's radar screen and give flight information. The tags, displayed by computer equipment, provide continuous identity and show the aircraft's position, as well as the altitude of those aircraft with automatic altitude-reporting transponders.

Airline Business Volume. U.S. air carriers reported all-time records in air travel and profits in 1965. In the first half of 1965, scheduled U.S. domestic and international carriers flew 31,587,055,000 revenue passenger-miles, up sharply from the 27,429,224,000 miles recorded in the first half of 1964. Available seat-miles rose to 58,337,368,000, up from 50,672,862,000.

In 1964, U.S. scheduled carriers (domestic and international) served 81,774,000 passengers, compared with 71,414,000 in 1963. Other 1964 figures included: revenue passenger-miles, 58,493,600,000 (50,361,200,000 in 1963); available seat-miles flown, 106,315,600,000 (94,843,600,000); and air freight ton-miles, 1,301,488,000 (1,025,660,000).

FINANCIAL STATISTICS—U.S. SCHEDULED AIRLINES, DOMESTIC AND INTERNATIONAL

	First half 1965	First half 1964
Operating revenues	$2,305,056,000	$2,007,664,000
Operating expenses	2,048,539,000	1,828,995,000
Operating income	256,517,000	178,669,000
Net income	138,935,000	79,395,000
	Full year 1964	Full year 1963
Operating revenues	4,252,159,000	3,757,097,000
Operating expenses	3,781,465,000	3,463,823,000
Operating income	470,694,000	293,274,000
Net income	226,405,000	76,897,000

Source: Air Transport Association.

The International Civil Aviation Organization reported that the airlines of non-Communist countries flew 156 million passengers a total of 107 billion passenger-miles in 1964, compared with 135 million passengers and 91.5 billion passenger-miles in 1963.

Other Developments. Air cargo continued to grow rapidly, and indications were that the volume of air cargo in 1965 would be more than 20% greater than in 1964. Cargo rates generally moved downward.

Transatlantic passenger fares were reduced in September. Within the United States, family fares were reduced, as were some long-haul fares. Airlines sponsored promotional programs to spur travel within and to the United States. Because of the airlines' increased financial strength, the Civil Aeronautics Board indicated that it would not grant any fare increases.

AEROSPACE INDUSTRY

The U.S. aerospace industry operated at a record level in 1965. The industry had expected a decline below the $20.7 billion sales of 1964, but increased military expenditures by the U.S. government in support of the Vietnam war brought sales up to about $20.9 billion in 1965. The earnings-to-sales rate was 2.3% in 1963, 2.6% in 1964, and 3.1% in 1965.

The U.S. aerospace industry is subject to wide fluctuations because of increases and decreases in military contracts. To meet this situation, the industry began in 1965 to investigate the possibility of entering nonaerospace fields to widen its base of support. Oceanology was one field considered adaptable to the technical skills of the aerospace industry. Road construction, shipbuilding, and nuclear technology were also considered.

Sales and Orders. In 1964 the aerospace industry had sales of $20,716,000,000, including $8,760,000,000 in aircraft, $5,311,000,000 in missiles, $4,761,000,000 in space vehicles, and $1,883,000,000 in nonaerospace fields. Missile revenue declined in 1965, while other types of revenue increased. The backlog of orders on June 30, 1965, stood at $16,762,000,000 for aircraft, missiles, engines, and space vehicles, compared with a backlog of $9,470,000,000 in the first half of 1964.

Employment. The aerospace industry employed 1,117,000 persons at the beginning of 1965—57,000 less than in 1964. However, by the end of the year the number of jobs had increased to about 1,132,000. The industry's payroll was $8.6 billion in 1964.

OTHER COUNTRIES

The USSR unveiled the world's largest airplane, to provide the major aerospace development outside the United States in 1965.

USSR. The AN-22 (or Antaeus), a 250-ton turboprop transport said to be able to carry an 80-ton cargo or 700 passengers, was exhibited at the international air show in Paris. The plane is powered by four 15,000-horsepower engines and has a maximum speed of 460 mph. Its length is 187 feet, and its wingspan 211 feet—both less than the dimensions of the planned C-5A. The USSR displayed other new aircraft at the show: a giant Mi-6 helicopter, an 186-passenger rear-engine jet, and the Mi-10 flying crane. The Russians also showed a model of the Tu-144 supersonic transport that will carry 121 passengers at 1,553 mph.

Britain. The British government ordered the 1,600-mph U.S. Phantom II fighter and canceled its own P.1154 project for a competitive plane. It also canceled the Hawker Siddeley HS-681 VTOL transport in favor of the American-made Hercules C-130E. The TSR-2 tactical strike reconnaissance aircraft also was canceled, and there was talk of ordering the U.S. F-111 to replace it.

Canada. The Canadian government committed itself to use the U.S.-made supersonic F-5 Freedom Fighter and placed orders for about 125 of these planes. After reevaluating its defense needs, Canada began building a tactical air force.

West Germany. The West German aeronautic industry continued to develop and build engines and aircraft capable of vertical takeoffs and landings.

RICHARD A. GOLDEN
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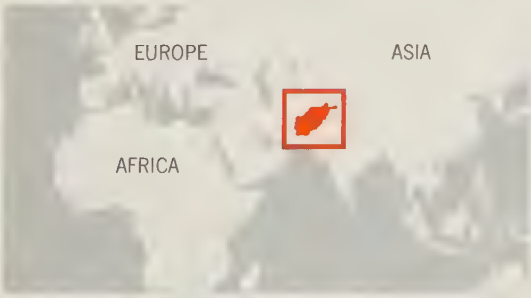
AFGHANISTAN



A new and more liberal constitution for the kingdom of Afghanistan, adopted in September 1964, was gradually put into effect during a 13-month transition period, which covered most of 1965. In March, Communist China extended its influence in the country by means of a $28 million, long-term, interest-free loan. The United States and the Soviet Union already were providing financial assistance to the Afghan economic development program.

AFGHANISTAN · Information Highlights

Area: 253,861 square miles.
Population: 15,227,000 (July 1, 1964 est.).
Chief Cities (1964 est.): Kabul, the capital, 400,000; Kandahar, 119,000; Herat, 62,000; Gardez, 46,000.
Government: *King*—Mohammed Zahir Shah (b. 1914; acceded 1933). *Premier*—Mohammed Hashim Maiwandwal (took office Oct. 29, 1965). *Parliament*—Wolesi Jirga, or House of the People, 216 members; Meshrano Jirga, or House of Elders, 79 members.
Religious Faith: Muslim, 99% of population.
Education: *Literacy rate* (1963), 10% of the total population. *Total school enrollment* (1962)—310,185 (primary, 277,004; secondary, 20,850; teaching-training, 2,974; technical, 6,853; higher, 2,504).
Finance (1965 est.): *Domestic revenues*, $74,100,000; *domestic expenditures*, $55,000,000; *monetary unit*, afghani (45 afghanis equal U.S.$1).
Cost of Living (1961, in Kabul): 98 (1958=100).
Manufacturing (metric tons, 1963): Cement (1964), 125,000; fuel briquets, 20,000; beet sugar, 9,000; woven cotton fabrics, 33,000,000 meters; woven rayon and acetate, 300,000 meters.
Crops (metric tons, 1963): Wheat, 1,967,000; maize, 713,000; barley, 378,000; cottonseed, 73,000; sugar beets, 56,000; wool, greasy (1962), 23,600.
Minerals (metric tons): Coal (1963), 98,000; salt (1964), 24,000; lapis lazuli (1963), 5.
Foreign Trade (1963): *Exports*, $68,989,000 (chief exports, 1963: karakul skins, $17,316,000; fruits and nuts, $14,419,000; raw cotton, $12,637,000; wool, $7,415,000); *imports*, $125,709,000 (chief imports, 1963: petroleum products $9,331,000; wheat, $7,309,000; electrical machinery and appliances, $4,493,000). *Chief trading partners* (1963): USSR (took 31% of exports, supplied 51% of imports); U.S. (took 16% of exports, supplied 18% of imports); India (took 13% of exports, supplied 8% of imports).
Transportation: *Roads* (1964), 4,045 miles (795 paved); *motor vehicles* (1964), 17,200 (automobiles, 7,000); *national airline*, Ariana Afghan Airlines; *principal airports*, Kabul, Kandahar.
Communications: *Telephones* (1964): 9,200; *radios* (1963), 25,000; *newspapers* (1962), 14 (daily circulation, 64,000).

National Elections. To implement the 1964 constitution, elections to the House of the People (*Wolesi Jirga*), the lower house of the new national legislature, were held by the government of Premier Mohammed Yusuf beginning Sept. 1, 1965. Elections also took place for the House of Elders (*Meshrano Jirga*), the partially elective upper chamber. Women voted for the first time in the 1965 elections, and the newly constituted legislature, which convened at Kabul on October 14, included four women among the 216 members of the lower house.

Premier Yusuf formed a new cabinet, which was approved by the legislature on Otcober 24. However, he resigned four days later, following a series of antigovernmental demonstrations. Mohammed Hashim Maiwandwal, a former ambassador to the United States, was named as Yusuf's successor.

Economic Development. Early in 1965 the government was faced with serious financial difficulties and a shortage of foreign exchange. These economic problems threatened to delay the current five-year plan (1962–66) for modernizing Afghanistan's predominantly herding and agricultural economy and for developing transportation, mining, and industry. When Marshal Chen Yi, the foreign minister of Communist China, paid an official visit to Kabul on March 22–24, he offered a badly needed $28 million development loan. The loan and other economic and cultural agreements were successfully negotiated during his visit. In 1965, construction was pushed on the national highway network, and the Jalalabad Canal, designed to irrigate 75,000 acres in southeastern Afghanistan, was completed.

Foreign Relations. In addition to drawing closer to the Chinese People's Republic, Afghanistan sought to retain good relations with both the Soviet Union and the West, in harmony with its policy of nonalignment. In August, King Zahir Shah, who had visited Peking in October–November 1964, paid a state visit to Moscow. In February 1965, Premier Yusuf spent ten days in New Delhi to promote closer cultural and trade relations with India.

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PIX

AFRICANS cheer British Prime Minister Wilson on his arrival in Rhodesia on October 25. Wilson failed to prevent the Ian Smith government from declaring Rhodesia's independence.

AFRICA

Compared with the early 1960's, there was a lack of spectacular events in Africa during most of 1965, and world attention shifted to greater emergencies in Asia and Latin America. The relative quiescence in Africa was welcome, because economic development, the continent's greatest need, is not likely to be achieved except under conditions of political stability.

The most jarring note was struck in the small, self-governing British colony of Rhodesia, where the government, failing to win Britain's consent, declared its independence on Nov. 11, 1965. Britain had refused to grant independence to Rhodesia without guarantees that the government, dominated by the country's 220,000 whites, would provide for eventual majority rule by the 4,000,000 Africans. Elsewhere, the Algerian government was overthrown in June, but other regimes seemed durable until a rash of military coups swept western and central Africa late in the year. Between Nov. 25, 1965, and Feb. 24, 1966, governments were ousted in the Congo (Léopoldville), Dahomey, the Central African Republic, Upper Volta, Nigeria, and Ghana.

Aside from these internal problems, there were a number of situations and trends, some with broad international significance, that commanded the notice of African specialists during 1965. Among these developments were signs of fragmentation among African states, rather than any measurable progress toward unity; Communist China's replacing Russia as the main threat of Communist influence in Africa; and the persistence of white supremacy in southern Africa, despite pressures to achieve majority rule.

One conclusion that may be drawn from the events of 1965 is that the division of African states between conservative and revolutionary blocs continues to be a feature of the contemporary African scene. In the early 1960's this cleavage had been very sharp, and African observers distinguished between the "Brazzaville" (conservative) and "Casablanca" (radical) groups. With the founding of the all-encompassing Organization of African Unity (OAU) at Addis Ababa, Ethiopia, in May 1963, this cleavage supposedly was eliminated. It was expected that, under the OAU, lesser groupings would be abandoned in the name of African unity. During the first two years of the OAU's existence this was the case to a large extent.

Conservative Groupings: the OCAM. In 1965 a bloc of conservative-leaning, French-speaking African states created the Organisation Commune Africaine et Malgache (OCAM) within the broader framework of the OAU. These states, members of the former Brazzaville group, had an admirable record—virtually unique in Africa—of mutual cooperation in financial, administrative, and military matters, not only among themselves, but also with their former imperial ruler, France.

In 1961, the Brazzaville states had created political ties among themselves by forming the Union Africaine et Malgache (UAM). The UAM was allowed to lapse in 1964, in deference to the OAU. It was replaced by the Union Africaine et Malgache de Coopération Economique (UAMCE), a looser body, limited to economic objectives and largely inactive.

The founding meeting of the OCAM was held in Nouakchott, Mauritania, on Feb. 10–12, 1965. The countries represented by heads of state were the Ivory Coast, Dahomey, Upper Volta, Niger (these four forming the especially close-knit group known as the Conseil de l'Entente), Togo, Gabon, the Malagasy Republic, Chad, Senegal, Cameroon, Mauritania, and the Central African Republic. The Republic of the Congo (Brazzaville) was represented only at the ministerial level and subsequently dissociated itself from certain passages in the communiqué issued at the end of the meeting. Enthusiasm for reviving the UAM, or creating something akin to it, was strongest among the first seven of the states listed above. The others, while willing to seek broader bases for cooperation than those that currently existed, were anxious to avoid political alliances that would seem to undercut the OAU. As a result, the OCAM amounts to a compromise between the political UAM and the economic UAMCE.

Three main motives, deeply intertwined, influenced the delegates at Nouakchott. First, there was discontent over the ability of the OAU to handle the explosive problems posed by the Congo (Léopoldville) because the question of whether to support the Congo's Premier Moïse Tshombe (since ousted) or to aid the Congolese rebels had split the OAU. Second, there was apprehension over the extent of Chinese Communist subversive activity in Africa, abetted by some African states. Third, there was a feeling that no Pan-African organization can be expected to work when some African states fail to respect the territorial integrity of their neighbors. (In this regard, the Brazzaville states particularly resented Ghana, which had served as a refuge for seditious groups from other African nations.)

The final communiqué from Nouakchott, announcing the creation of the OCAM, made no outright mention of China, but China was clearly meant by the reference to "covetous designs from abroad." The references to Ghana and the Congo were more specific:

> "Considering that the malaise from which the OAU is suffering derives essentially from the lack of respect given to its Charter;
>
> "Considering that respect for the sovereignty of the states, and noninterference in their internal affairs, constitute the *sine qua non* conditions for peace and development in Africa. . . .
>
> "The Chiefs of State of the Organization . . . solemnly affirm the urgent necessity of bringing peace back to Congo (Léopoldville) through aid to the legal government to hasten national reconciliation in order and liberty. They energetically condemn the action of certain states, notably Ghana, which harbor agents of subversion and organize training camps on their national territory."

Nine of the OCAM heads of state met again on May 25–26 at Abidjan, Ivory Coast. They approved the admission to the organization of the Congo (Léopoldville) and resolved to boycott the OAU summit meeting scheduled for September in Accra, Ghana. During the year, Rwanda also joined the OCAM, and Mauritania left, so that at the end of 1965 the members included Cameroon, the Central African Republic, Chad, the two Congos, Dahomey, Gabon, the Ivory Coast, the Malagasy Republic, Niger, Rwanda, Senegal, Togo, and Upper Volta.

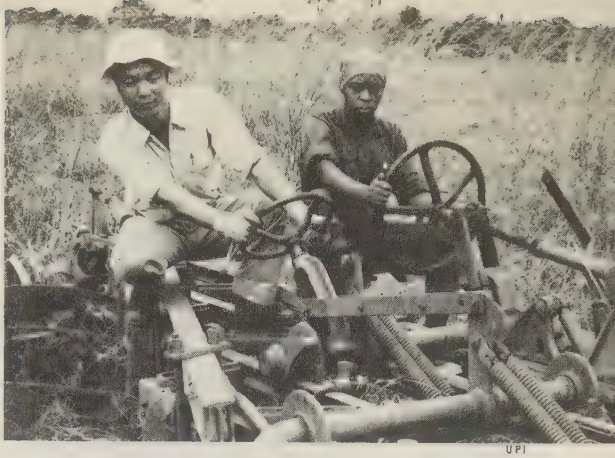
Disharmony in the OAU. Members of the Organization of African Unity demonstrated little unity during 1965. There was a lack of accord among members on a common policy toward the Congo, and several governments charged their neighbors with aiding political refugees in launching subversive plots. However, all members were able to agree on condemning the minority white government of Rhodesia.

The fourth ordinary session of the OAU Council of Ministers met in Nairobi, Kenya, from February 26 to March 9. Congolese Premier Tshombe was present, and, while he failed to secure the African peacekeeping force he requested, he escaped the criticism liberally dealt him at past OAU meetings.

The Council of Ministers met again in an emergency session at Lagos, Nigeria, June 10–13, to hear charges by Niger, the Ivory Coast, and Upper Volta that Ghana's sponsorship of subversive groups should disqualify Accra as the site of the proposed heads of state conference. Noting that Ghana had offered to expel undesirable refugees, the ministers voted to hold the meeting at Accra and to examine the problems of refugees and subversion there.

The summit meeting, originally scheduled for September, finally took place at Accra, October 22–26. Seven OCAM members boycotted the talks, and 11 other states sent lower level delegations, so that only 18 of the 36 heads of state were present. The conference issued a resolution urging Britain to take over the administration of Rhodesia by force to prevent the Rhodesian government from unilaterally declaring independence. They also condemned subversion by political refugees.

Disunity in East Africa. Not only did the unity of the OAU appear to be weakened in 1965, but also, regrettably, international cooperation in East Africa, where it had existed for many years. Under British rule, Uganda, Kenya, and Tanganyika had a network of common services, which were maintained after independence. In fact, for a time, there was enthusiastic talk of forming a federal union among the three participants.



UPI

TANZANIAN FARMER (right) is taught how to operate a tractor by his Communist Chinese agricultural instructor.

The events of 1965 destroyed the hope of union and may even have endangered existing cooperative efforts. President Jomo Kenyatta of Kenya, a political moderate, was forced by a number of incidents to assume an increasingly critical attitude toward the revolutionary tendencies shown by Tanzania (the union of Tanganyika and Zanzibar). Finally, Tanzania tore the fragile fabric of East African unity on June 10 by withdrawing from the common currency arrangement with the other two countries. This was done after a visit to Tanzania by Communist China's Premier Chou En-lai, who concluded trade and aid agreements with Tanzania.

Late in the summer, the heads of state of Kenya, Uganda, and Tanzania became concerned over the economic losses likely to accrue from abandoning their common market and common services. They met several times, and on September 1 they issued a statement confirming their decision to maintain and strengthen the regional institutions. Nevertheless, the three nations were estranged, although some hope of economic cooperation remained.

(*Continued on page 34*)

ZAMBIAN SOLDIERS mobilize against the alleged threat posed by independent Rhodesia on Zambia's southern border.

UPI

AFRICA

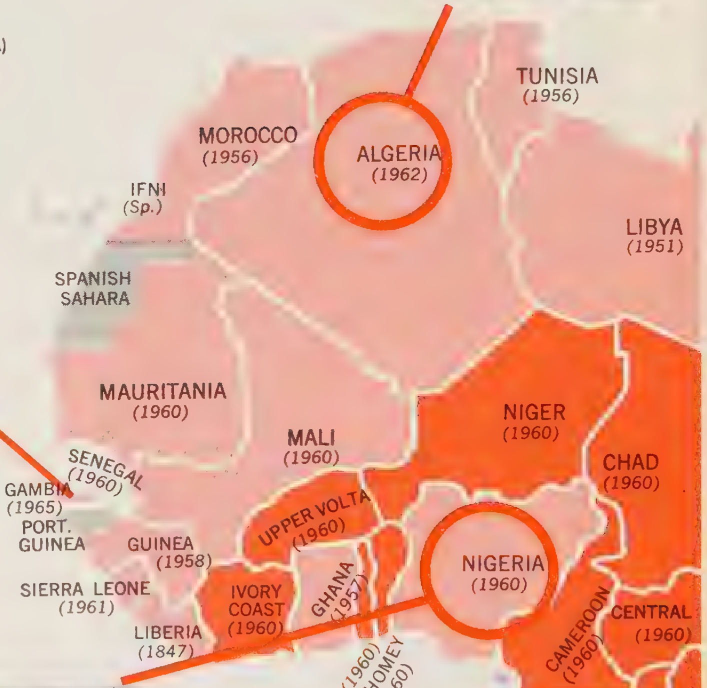
▨ Members of the Organization of African Unity (OAU)

🟥 Members also of the Organisation Commune Africaine et Malgache (OCAM)

(Dates indicate year of independence)

PIX

ALGERIA's army chief, Houari Boumedienne, ousted President Ben Bella and took control on June 19, 1965.



TUNISIA
(1956)
MOROCCO
(1956)
ALGERIA
(1962)
IFNI
(Sp.)
LIBYA
(1951)
SPANISH
SAHARA
MAURITANIA
(1960)
NIGER
(1960)
MALI
(1960)
SENEGAL
(1960)
CHAD
(1960)
GAMBIA
(1965)
PORT.
GUINEA
GUINEA
(1958)
UPPER VOLTA
(1960)
NIGERIA
(1960)
SIERRA LEONE
(1961)
IVORY
COAST
(1960)
GHANA
(1957)
CENTRAL
(1960)
LIBERIA
(1847)
CAMEROON
(1960)
TOGO (1960)
DAHOMEY
(1960)
RÍO MUNI
(Sp.)
GABON
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CONGO
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CABINDA
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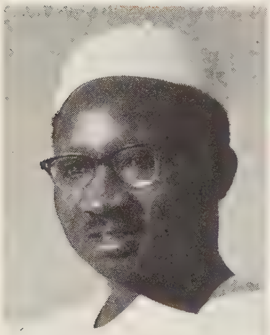
ANGOLA
(Port.)
SOUTH
WEST
AFRICA


BARON STUDIOS LTD

GAMBIA achieved independence from Britain under Prime Minister David K. Jawara (above), Feb. 18, 1965.

UPI

NIGERIA experienced political friction and rioting during most of 1965, leading to the overthrow of the civilian government on Jan. 15, 1966. *(Left)* Tear gas squad subdues rioters in Ikenne, Western Nigeria, on Nov. 28, 1965.

PICTORIAL PARADE

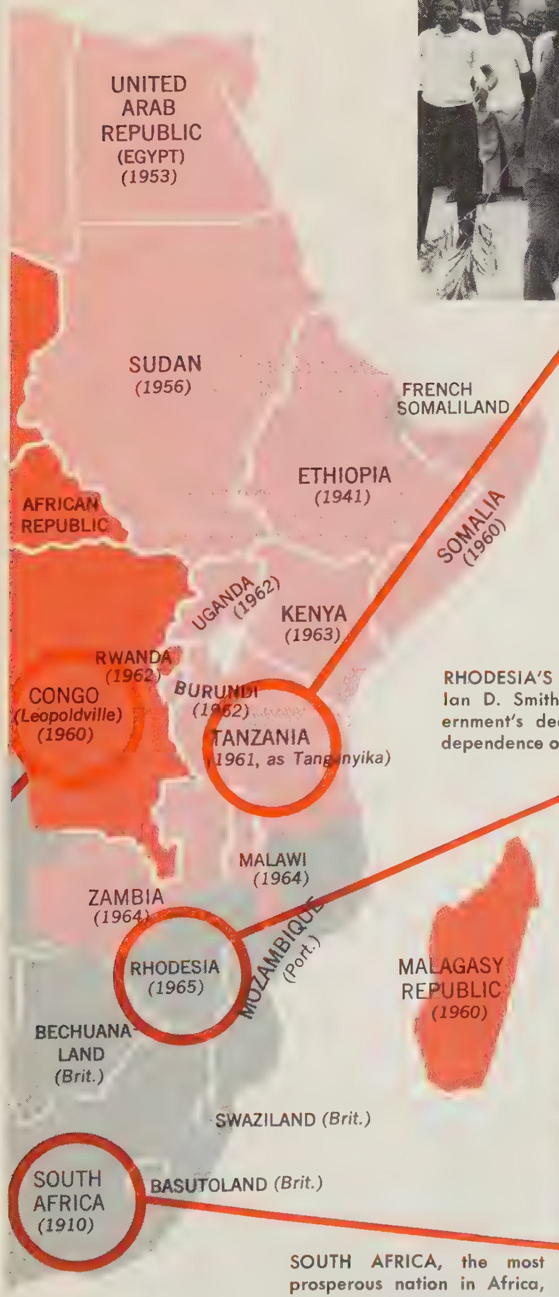
THE CONGO (Léopoldville) changed governments on Nov. 25, 1965, when General Mobutu (seated) seized power in a bloodless coup d'état.

AFRICA underwent political change in 1965. Tiny Gambia achieved independence February 18, and white-controlled Rhodesia declared independence November 11. The Algerian government was overthrown June 19, and military coups occurred in six western and central African republics between Nov. 25, 1965, and Feb. 24, 1966.

MUA TANZANIA
WETU
JOLIE
DIPLOMATIC RELATION WITH BRITAIN ON DECEMBER
UNLESS BRITAIN CRUSH
THE RHODESIAN REBELLION
THAT DATE
God Bless the OAU
Smith the Robber go
Hell with your illegal
Government Zimbabwe
The Black Man's Land

KEYSTONE

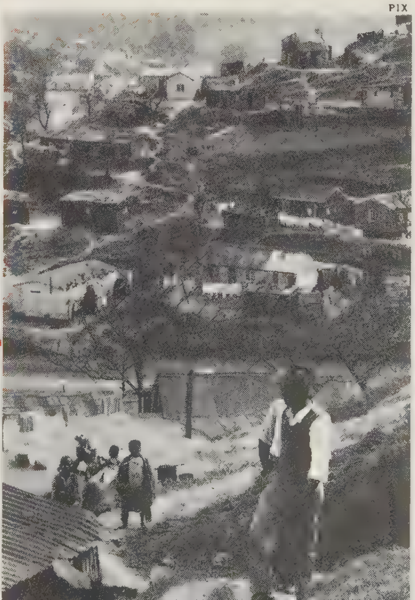
TANZANIANS demonstrate against the minority regime in Rhodesia and challenge Britain to crush it by December 15.


UNITED ARAB REPUBLIC (EGYPT) (1953)
SUDAN (1956)
FRENCH SOMALILAND
ETHIOPIA (1941)
SOMALIA (1960)
AFRICAN REPUBLIC
UGANDA (1962)
KENYA (1963)
RWANDA (1962)
BURUNDI (1962)
CONGO (Leopoldville) (1960)
TANZANIA (1961, as Tanganyika)
MALAWI (1964)
ZAMBIA (1964)
RHODESIA (1965)
MOZAMBIQUE (Port.)
MALAGASY REPUBLIC (1960)
BECHUANALAND (Brit.)
SWAZILAND (Brit.)
SOUTH AFRICA (1910)
BASUTOLAND (Brit.)

RHODESIA'S Prime Minister Ian D. Smith signs his government's declaration of independence on Nov. 11, 1965.

UPI

PIX



SOUTH AFRICA, the most prosperous nation in Africa, has Colored slums and shanty towns surrounding its major cities, as in this scene on the outskirts of Durban.

WIDE WORLD PHOTOS

CONGO SHAKEUP: Gen. Mobutu (r.) stepped into a power struggle between President Kasavubu (bottom l.) and ex-Premier Tshombe (top l.) and assumed presidency on November 25. Col. Mulamba (center) became premier under Mobutu.

Afro-Asian Conference. Africa was to have provided the setting for the second conference of African and Asian heads of state—the so-called Second Bandung Conference, the first having been held in Indonesia in 1955. The new meeting originally was scheduled to open on June 29 in Algiers, but after days of hesitation and negotiation among the participants, it was postponed to November 5. Three days before the rescheduled opening, however, a preliminary foreign ministers session postponed the conference indefinitely. Basically, few states seem to have wanted the conference, and the postponement made clear that little hope had existed for any positive outcome. (See also ASIA.)

Gambian Independence. Gambia, Britain's oldest and smallest colony in West Africa, became independent on February 18, bringing the total number of independent African nations to 37. The following day, Gambia signed treaties with neighboring Senegal, laying the foundation for a cooperative effort without which tiny Gambia might not survive.

The Congo (Léopoldville) Situation. The former Belgian Congo, for four years the sick man of Africa, showed some modest signs of returning to stability in 1965. The various rebel groups, no longer able to maintain serious warfare against government forces, were reduced to hit-and-run operations, and to infiltrating areas without permanent garrisons.

Early in the year the prestige of Premier Tshombe seemed to be growing. His CONACO party won the spring national elections, and he was gaining reluctant acceptance from other African states. However, there were signs of a coming power struggle between Tshombe and President Kasavubu.

On October 13, at the opening session of the new parliament, Kasavubu dismissed Tshombe, saying that the constitution required his resignation. Kasavubu named Évariste Kimba, once foreign minister under Tshombe in secessionist Katanga Province, as the new premier. Kimba pledged a coalition government of "national union," but Tshombe refused to bring his CONACO party into the coalition. On November 14 he succeeded in blocking parliamentary confirmation of the Kimba government. Then, on November 25, Gen. Joseph Mobutu ousted Kasavubu in a bloodless coup and took power himself. In his words, "the race for the top [was] finished."

Upheavals in Western and Central Africa. The coup in the Congo was the first of six successive government upheavals in western and central Africa within three months. It was followed by the downfall of President Sourou Migan Apithy of Dahomey on November 29, President David Dacko of the Central African Republic on Jan. 1, 1966, President Maurice Yaméogo of Upper Volta on January 4, Prime Minister Sir Abubakar Tafawa Balewa of Nigeria on January 15, and President Kwame Nkrumah of Ghana on February 24. In all cases, military forces overthrew civilian governments, expressing discontent over failures to solve economic and social ills. While contagion may have been a factor, there was no evidence of interconnection or outside instigation. The coups were strikingly similar because they were precipitated by domestic situations common to underdeveloped African states.

North Africa. On June 19, 1965, Algeria's President Ahmed Ben Bella was ousted in a military coup by Col. Houari Boumedienne. In July, France concluded a long-term oil and gas agreement with the new government, giving Algeria a larger share in oilfield profits, but retaining rights to these fields and to military bases in Algeria.

Ben Bella's disappearance from the scene left President Nasser of Egypt with one less rival as the leading radical nationalist of Africa. However, a new rival appeared in the person of President Habib Bourguiba of Tunisia, who adopted an attitude of outright criticism of what he called Nasser's "hegemony" over Arab League policy.

Southern Africa. In southern Africa, the remaining area of white supremacy on the continent, there was no substantive trend toward majority rule. In fact, the only changes were in the direction of strengthening the status quo.

In Rhodesia the election of May 7 resulted in an overwhelming victory for Prime Minister Ian Smith's ruling Rhodesian Front party. After Britain refused to grant Rhodesia independence without guarantees for majority rule, Smith threatened to declare independence. Support for Britain and condemnation for Rhodesia came from the OAU, the UN Security Council and General Assembly, and many nations. Negotiations between Britain and Rhodesia having broken down, Smith issued a unilateral declaration of independence on November 11.

In the large Portuguese colonies of Angola and Mozambique, attempts dwindled during the year to overthrow the existing regimes by rebellions supported from the outside (see PORTUGAL). In the Republic of South Africa, home of the policy of racial segregation known as apartheid, there were no disorders such as occurred in former years, and the government seemed to be attaining its objectives. Even critics were obliged to concede that the "Bantustan" policy of creating "Bantu homelands" within South Africa appeared to be working in Transkei, the first homeland, and the government planned to create a Zulu state as the second.

The three remaining British territories in Africa—Bechuanaland, Basutoland, and Swaziland—were scheduled to become independent under majority rule in 1966. All are geographically and economically dependent on South Africa, and their leaders have expressed interest in trading with South Africa despite objections to apartheid. (See also COMMONWEALTH OF NATIONS; articles on African countries.)

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AGRICULTURE

Major trends and events in agriculture in 1965—record crops, scientific advances, and expanded government services—are reviewed in this article under the following headings: (1) U.S. Agriculture in 1965; (2) Agricultural Research; (3) Farm Services.

U.S. AGRICULTURE IN 1965

American farmers set another crop record in 1965, pushing both yield per acre and total production to new highs. However, livestock production dipped slightly from the record high of 1964.

Gross farm income reached a new high of $44.2 billion, up from $42.2 billion in 1964. But production expenses also increased to a record $30.2 billion, leaving $14 billion in net cash income—the highest total since 1952 and about 8% more than in 1964.

Net income per farm rose about 10% during 1965—from $3,727 to $4,100. The gain reflected the higher overall farm income and the departure of some 550,000 persons from farming during the year. It represents an increase per farm of about 40% over the past five years.

Farm Income and Prices. The increase in farm income stemmed from substantially higher prices for livestock and livestock products (including poultry and eggs), and increased direct government payments. About $1.75 billion of the increase in gross farm income was credited to the 8% rise in prices for livestock products. Direct government payments totaled $2.4 billion, up from $2.17 billion in 1964. Average crop prices dropped about 3%, but marketing volume remained the same as in 1964. Average farm prices received in 1965 stood about 4% above those of a year earlier. Total cash receipts from marketings in 1965 were estimated at 5% over those of 1964.

Led by a jump of about 35% in the price of hogs, meat-animal prices advanced 16% over those of 1964. Poultry prices rose 5% despite a 7% increase in marketings. Wholesale milk prices also advanced from the 1964 levels.

Lower cash receipts from wheat reflected a lower loan rate on the 1965 crop. Increased direct payments to producers kept the decrease from becoming substantial. Lower cash receipts for corn resulted from a 1964 crop so small that it more than offset slightly higher prices. More soybeans were marketed in 1965, at prices 10% higher than a year earlier. Cash receipts from cotton fell slightly, mainly because of lower prices and a lag in processing raw cotton at gins.

Production expenses climbed, with motor vehicles, machinery, fencing and building materials, feed, and feeder livestock costing more. The index of prices paid by farmers for production items, interest, taxes, and wage rates showed levels about 22.5% higher than in 1964.

Food Production. The U.S. all-crop production index (1957–59 = 100) advanced to 117, well above the 109 of 1964 and even above the record 112 in 1963. The per-acre yield index for 28 crops soared to an estimated 123, a record 6% over the previous high of 1963.

Crops planted for 1965 harvest totaled nearly 308 million acres, up 1.5 million acres from a year earlier but slightly below the 1963 total. Plantings ran considerably above the record low of 301 million acres in 1962. Preliminary estimates of crop production placed the year's key increases at about 22% for soybeans, 16% for feed grains, and 5% for wheat.

Meat and poultry production slipped slightly, dropping to 39.67 billion pounds in 1965 from 40.39 billion pounds in 1964. Milk marketed totaled about 125.5 billion pounds, slightly below the record 126.6 billion in 1964.

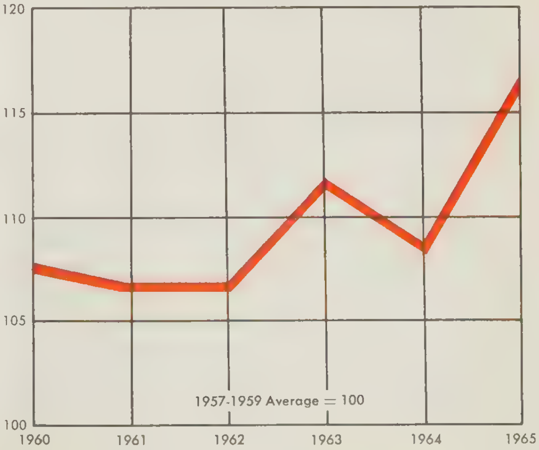
Food Consumption. The average American ate slightly less food in 1965. The per capita food consumption index (1957–59 = 100) slipped to 101.4 for the year, down from 102 in 1964—the highest point in five years. Meat and poultry consumption per person dropped by 4.8 pounds to 208.4 pounds. The average American ate 99.3 pounds of beef, second only to 100.4 pounds in 1964. He bought almost 5 pounds less pork, for a total of 60.2 pounds—the lowest average since 1958. Veal, lamb, and mutton consumption also dropped. The consumer ate seven less eggs during the year, and about the same amount of fish and vegetables as in 1964. Consumption of all dairy products except cheese and ice cream was off slightly. Some gains occurred, and the average individual ate 4% more chicken (or 33.1 pounds) than in 1964, slightly more turkey, and considerably more fruit.

Agricultural Employment. The index of farm wage rates (1957–59 = 100) increased to a new high of 125 in 1965, up six points from a year before. Wages averaged 93 cents an hour in 1965, up three cents in a year. The farm work force declined about 10% in 1965 from the 6,110,000 in 1964. The hired labor bill for 1965 was lower than in 1964, because the reduction in hired workers more than offset the increase in farm wage rates.

Farm Assets and Land Values. The market value of farm real estate on Jan. 1, 1966, totaled an estimated $170 billion, up $10.6 billion (6.6%) from a year earlier. The value of all agricultural assets, including crop and livestock inventories, was estimated at $253.2 billion on Jan. 1, 1966, up $15.4 billion in a year. Liabilities against these assets, including debt on real estate and loans from other creditors, was estimated at $41.1 billion, leaving a balance of $212.1 billion in agricultural equities (up $11.8 billion).

Agricultural Exports. For the second year in a row, exports of U.S. farm commodities for the fiscal year ending June 30, 1965, totaled a record $6.1 billion. Commercial sales fell just short of the $4.5 billion in the fiscal year 1964. Heavier overseas shipments both before and after the longshoremen's strike in January and February made up for reduced exports during that period. Exports of corn, soybeans, oil-

U.S. ALL-CROP PRODUCTION INDEX



Source: U.S. Department of Agriculture

seed products, and some animal products increased their pace of a year earlier. Wheat exports dropped slightly, to 728 million bushels.

Farm Legislation. Major shifts in agricultural policy came in an omnibus farm bill, signed by President Johnson Nov. 5, 1965, and effective in 1966. The legislation set commodity programs through 1969 to give the nation the lengthiest program for major crops it has had since World War II. The legislation made major changes in the cotton program, dairy production controls, long-term land retirement, and government purchases. It also altered the wheat and feed grains programs. In general, the legislation shifted subsidy policy further away from high government price supports and toward cash payments from the government to farmers.

As a result of the bill, the cotton, wheat, and feed grains programs include payments to farmers who divert acreage to other uses. The programs cut acreage allotments and hold price supports at or near the world price level.

For wheat growers, a voluntary two-price system was enacted to return up to 100% of parity prices for wheat used by domestic food processors. The processor is required to pay the difference between the support level and $2 a bushel (a difference of 75 cents in 1966) for domestic marketing certificates. The government pays the amount over $2 necessary to bring the total return per bushel to 100% of parity (about $2.56 in late 1965).

Growers complying with wheat provisions in 1966 become eligible for price-support loans (averaging $1.25 a bushel), plus certificate and diversion payments. Compliance requirements are largely unchanged from 1964. However, diversion payments are authorized on additional voluntary diversions up to 50% (previously 20%) of farm allotment or on total diverted acreage up to 25 acres—whichever is larger.

The voluntary feed grains program for corn and grain sorghums was continued except for three changes. These allowed (1) producers to substitute soybeans for feed grains under certain conditions on permitted feed grain acreage; (2) price support payments-in-kind to be varied and made on only a part of acres planted for harvest; and (3) barley to be included under the program in 1966 with certain conditions.

The new law allows cotton growers, for the first time, to come under the acreage diversion system used for wheat and feed grains. This will enable growers to cut production without suffering net income loss. It sets a one-price cotton plan under which mills obtain supplies at world prices. A 16-million-acre minimum allotment is provided, and price support ranges between 65% and 90% of parity. The law establishes farm domestic allotments at not less than 65% of the farm acreage allotment.

Cooperators in the cotton program may plant at least 87.5% of their farm allotment in 1966. They will receive diversion payments of at least 25% of parity (10.5 cents per pound is indicated for 1966) on acres not planted, and price support payments at 9.42 cents per pound on domestic-allotment production. In addition to receiving price-support and diversion payments, a grower may divert further cotton acreage to conserving uses and get additional payments based on rates up to 40% of parity. A special provision allows small farmers to obtain benefits without diverting acreage.

The law sets the minimum resale price of government cotton stocks at 110% of the price-support loan cost (21 cents in 1966, compared with 29 cents in 1965), which can be no more than 90% of the average world market price. Also established is a national export market acreage reserve of up to 250,000 acres to be used for export crops. Farmers obtaining a share of this reserve must sell all their 1966 cotton for export and give up price support on all cotton grown on their farm.

A new program encourages farmers to leave cropland unplanted. Similar to the Soil Bank started in 1956, the cropland adjustment program makes rental payments to farmers who retire at least the allotment or base acreage of a crop for 5 to 10 years. Adjustment payments may be made on an annual, lump sum, or installment basis. They are negotiated by means of bids.

Participating farmers qualify to share with the government the cost of seeding idled land, adopting soil and water conservation practices, and building ponds and planting trees. Most acreage also qualifies for wildlife service payments to permit public access for hunting, trapping, hiking, and other recreational purposes.

The government will arrange for retiring up to 40 million acres of cropland and placing it in conservation uses. A sum of $225 million is provided in 1966 for the first of four years in which farmers can sign to participate in the program. Acreage retired can include whole farms, but total acreage is limited in any one community.

The new farm law permits the government to buy dairy products, except fluid milk, at market prices when Commodity Credit Corporation stocks are insufficient to meet needs of school lunch, Food for Peace, and other foreign and domestic programs.

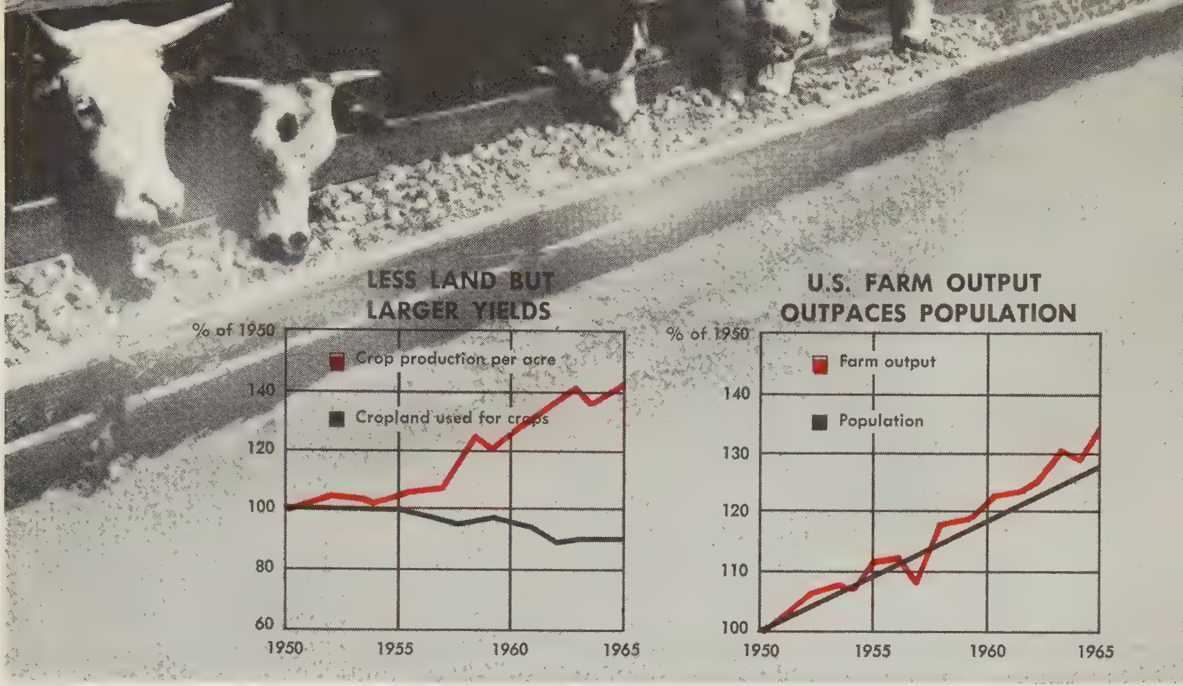
Another change authorizes, through 1969, referendums by producers for adoption of milk marketing programs—known as Class I base plans—in the 75 federal milk markets. Producers who qualify retain their share of higher-priced Class I sales when they cut back total production from the level of an assigned base or quota. The balance, normally designated Class II milk, will be marketed at the lower price level for milk used in manufacturing. Approval requires a two-thirds majority of the individual producers who vote in the referendum.

Other important farm legislation: (1) extended indemnity payments to dairy farmers who had milk banned from markets because it contained residues of pesticides registered and approved by the government at time of use; (2) appropriated $20 million for matching grants to help develop water-supply and sewage-disposal systems in rural areas; and (3) provided authority for acreage-poundage quotas (approved by growers in a 1965 referendum) in place of existing acreage allotments for the 1965 flue-cured tobacco crop, and for other tobacco, beginning in 1966. (See also COTTON; COFFEE; DAIRY PRODUCTS; FRUITS; GRAINS; LIVESTOCK; SUGAR; TEA; TOBACCO; VEGETABLES; WOOL.)

RAY REIMAN
President, Farm Business, Inc.

AGRICULTURAL RESEARCH

The Agricultural Research Service (ARS), an agency of the U.S. Department of Agriculture, conducts research concerned with farming, human nutrition, clothing and textiles, consumer and food economics, marketing, and new uses for agricultural products. The agency also conducts regulatory activities to control plant and livestock pests, to prevent the entry of such pests into the United States,



JOHN DEERE & CO.

U.S. FARMERS increased efficiency in cattle feeding and hay storage in 1965 with a new "cubing" machine that can compress loose alfalfa into bite-size pellets.

and to assure that pesticides meet standards of safety and effectiveness. Much of the agency's work is accomplished in cooperation with state agricultural experiment stations.

Soil Research. Basic soil and water research produced a solar still that extracts drinking water from desert soils and plants for emergency survival. The still consists of a bowl-shaped hole in the ground, a sheet of plastic covering the hole, and a container placed beneath the plastic. Soil holds the edges of the plastic in place, and a rock in the center of the sheet weights it down to form an inverted cone. Water evaporated from the soil by solar energy condenses on the underside of the plastic and drips into the container. As much as two or three pints of water can be obtained daily.

Plant and Animal Research. Plant-growth research led to the isolation and identification of the "light switch" that can start and stop many plant growth processes. Researchers studied a protein molecule, called phytochrome, that acts in response to light to govern flowering, germination, and other plant-growth processes. They discovered that the switch is the molecule's chromophore (pigment), whose action depends on the light it receives.

New crop varieties released to growers and nurserymen in 1965 included a pecan with large, high-quality nuts; a strawberry especially suited for making jams and jellies; and a Bermuda grass variety for golf greens.

In special feeding tests, bull calves grew faster and more efficiently than their twins raised as steers, and were ready for slaughter two months sooner. Bull beef was tested and approved by consumers. This development may open new markets for bull beef, now primarily used in processed meats.

Ammonium chloride added to the diet of sheep and cattle protected them from urinary calculi ("water belly") disease.

Scientists learned how to remove lamb fetuses from ewes, make skin grafts from other sheep, and return the fetuses to the wombs. The lambs continued to develop, were born normally, and showed no scars. Surgical techniques worked out are being used in medical research aimed at preventing birth defects in humans.

Insect Control. A low-volume aerial-spray technique developed by ARS was used against the cereal leaf beetle and the boll weevil. This technique, in which undiluted malathion is applied in extremely small amounts, is safer, faster, and cheaper than the conventional aerial spraying of insecticides diluted with large amounts of water or oil.

Entomologists isolated and identified feeding stimulants for female houseflies. These substances cause hundreds of flies to cluster and feed on a small area of filter paper containing less than one-millionth of an ounce of the stimulant. Further research will seek to determine whether the materials have practical value for controlling houseflies.

Disease-carrying aphids that attack squash, cucumbers, and cantaloupes are repelled by the color of aluminum foil. When these crops were mulched with strips of foil they yielded about five times more than unprotected plants.

Automated Irrigation. Two fully automated irrigation systems were developed to conserve water and labor. The systems use radio signals to open and close inflatable valves at predetermined times, and are controlled from the farmhouse. Automated irrigation gives the farmer more precise control over the length of time he irrigates his fields and frees his time for other farm activities.

Nutrition and Product Research. Nutritionists studying the relationship of diet to body function and longevity found that rats which ate excessively and gained weight rapidly died at an early age, regardless of the composition of their diets. In nutrition, the combination of foods in the animals' diets appeared to play a bigger role than individual foods.

A method was developed to remove 80% of the oil and almost 75% of the calories from peanuts without impairing their flavor or protein content. The oil is pressed out of the peanut meats by a hydraulic press. When soaked in water, the flat but unbroken nuts return to their original shape and size.

Data for Consumers and Industry. Studies showed that fat-based detergents are readily broken down in closed sewage systems, such as septic tanks, and will not cause foaming in streams and water supplies. However, petroleum-based (ABS) detergents were not broken down, and appeared to have a toxic effect on the microorganisms that were expected to digest them.

Oil of crambe—a new oilseed crop—was evaluated by industry for use in steel casting, new nylon products, and waxes. The meal remaining after the oil is extracted is 40 to 45% protein and contains most of the amino acids needed in animal feeds. However, the meal contains some undesirable components. Research showed that treating the seed or meal with ammonia in gas form or with ammonia in water successfully deactivated these substances.

Textile bacteriologists conducted exploratory experiments on bacteria that survive on clothes washed in cold-water detergents. Earlier studies had indicated that large numbers of bacteria survive warm- and hot-water laundering unless a disinfectant is added to the wash. The government researchers found that when no disinfectant was used, appreciably more bacteria survived cold-water washes than survived hot-water washes. However, the addition of chlorine or quaternary disinfectants lowered the bacteria count regardless of the water temperature.

Improved Food Handling. New loading patterns were developed to enable truckers to deliver bagged early potatoes in better condition to consumers. The new patterns allow better air circulation, thus reducing temperature and moisture conditions that damage early potatoes during shipment.

Studies showed that improved work practices and equipment can significantly speed up the receiving of grain sorghum at country elevators, and that the time required for weighing, unloading, and other receiving operations can be reduced without making major changes in plant layout. Elevator capacities can be increased 15% or more with proper adjustment and maintenance of elevating equipment.

Pesticides. ARS regulations protect the general public by requiring that manufacturers register pesticides with the secretary of agriculture before shipping them across state lines. Before a registration is granted, a pesticide must meet rigid tests that prove its claimed effectiveness against a particular pest or pests and that demonstrate its safety to humans, crops, livestock, wildlife, and other resources when used as directed. In 1965, Secretary of Agriculture Orville L. Freeman appointed a task force to study ways to streamline procedures now used to determine the safety and effectiveness of pesticides.

Results of a year's analysis of farm pesticide use in the Mississippi River delta showed no progressive buildup of pesticides in soil, sediment, and water. The study is part of a federal monitoring program begun in 1964. In 1965 the program was extended to parts of North Dakota, Minnesota, and Arizona.

Livestock Disease Eradication. Populations of the screwworm, a costly livestock pest, have been eradicated from all states except Arizona and California, and a cooperative eradication program was begun in these two states. In cooperation with Mexico, ARS established a living barrier of sexually sterile screwworm flies to prevent reinfestation of U.S. areas. A cooperative survey was undertaken in Mexico to learn more about screwworm problems.

Under joint state and federal eradication drives against animal diseases, the number of hog cholera outbreaks was cut in half in the leading hog-producing states—Illinois, Indiana, Iowa, Minnesota, and Missouri. For the United States as a whole, the number of confirmed outbreaks for the year fell below 900, compared with 1,117 a year earlier.

More than 86% of the counties in the United States had reduced the incidence of brucellosis in cattle to less than 1% by mid-1965. The disease had been eradicated from 470 counties in 25 states, the Virgin Islands, and Puerto Rico. All of Connecticut, Maine, Massachusetts, Rhode Island, Utah, Vermont, Wisconsin, and the Virgin Islands had achieved certified brucellosis-free status.

Efforts to eradicate brucellosis from swine continued, and validated brucellosis-free herds totaled 1,920, as compared with 1,667 a year earlier. There were 87 brucellosis-free counties (including all the counties in Vermont and Utah)—up 35 from mid-1964.

In the cattle-tuberculosis eradication campaign, 541 counties in 20 states and Puerto Rico were declared accredited tuberculosis-free.

Sheep scabies had been eradicated from 49 states, Puerto Rico, and the Virgin Islands, leaving only Iowa as an infected area.

Biochemical Research. ARS biochemists determined for the first time the molecular structure of one of the ribonucleic acids (RNA's). This research ultimately may lead to ways of altering the genetic characteristics of living organisms by modifying the structure of nucleic acids. Nucleic acids also play a role in cancer growth and virus-disease transmission.

Animal and Plant Inspection. Under laws protecting U.S. livestock from foreign diseases and pests such as ticks and mites, inspectors refused to allow 19,592 animals to enter the United States in the fiscal year 1965. The animals permitted to enter numbered 685,731.

In the fiscal year 1965, more than 30 million ships, planes, trains, and automobiles were inspected in an effort to keep out foreign plant pests. Inspectors reported 27,572 interceptions of insects, diseases, and other pests, and prevented the entry of 446,247 lots of prohibited plant material.

E.G. Moore
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FARM SERVICES

All four agencies assigned by the U.S. Department of Agriculture to provide loans, credit guarantees, crop insurance, and other services to people in rural areas set records in 1965. The Farmers Home Administration lent $798 million—an all-time high. The Rural Electrification Administration provided $477 million in expansion credit to electric and telephone systems. The Federal Crop Insurance Corporation wrote insurance valued at $594 million on farm crop-production investments for nearly 16 million acres. The Farm Credit System lent a record $6.6 billion to farmers, ranchers, and cooperatives.

Farmers Home Administration. In the fiscal year 1965 the Farmers Home Administration (FHA), which supplements credit from private sources, assumed a larger role in efforts to fight poverty, rebuild rural communities, and strengthen the family farm unit. The loans made and insured by the administration totaled a record $798 million, as against $743 million in 1964, and benefited an estimated 1.8 million persons.

The agency stepped up its rural development efforts by lending more than $50 million for rural water systems, $133 million for rural housing, and $1.6 million for pilot rural-renewal projects. It also granted $19.6 million in economic opportunity loans to 11,022 low-income rural families.

Family farm loans, the oldest FHA program, provided nearly $483 million in credits to 85,026 families. Farm-operating loans accounted for $300.4 million of the total, and farm ownership loans to 12,186 families made up the rest.

The agency also extended $78.5 million in emergency operating credit to farmers in areas hit by floods, drought, and other disasters. This amount brought to $873 million the total lent under this program in the past 15 years.

Loans for the construction of modern, urban-style water distribution systems amounted to $50 million for 388 projects in 33 states, as compared with $34 million for 271 projects in 1964. This expanding program, totaling $108.9 million since it was begun in 1961, has brought running water to more than 480,000 rural people. About two thirds of the total was in FHA-insured loans from private investors.

Rural-housing loans for construction and remodeling—a program begun 16 years ago but stepped up sharply in 1961—were granted to 15,814 families and rural groups in 1965. These loans included $7,636,000 for rural housing for the elderly and $2,065,000 for rental housing for farm workers and retired persons.

Loans outstanding at the end of fiscal year 1965 totaled $2.75 billion, as against $2.3 billion in 1964. Principal and interest repayments of $512.3 million during 1965 were the largest in FHA history. The total lent under FHA auspices during its 30 years of operation amounted to $6.85 billion.

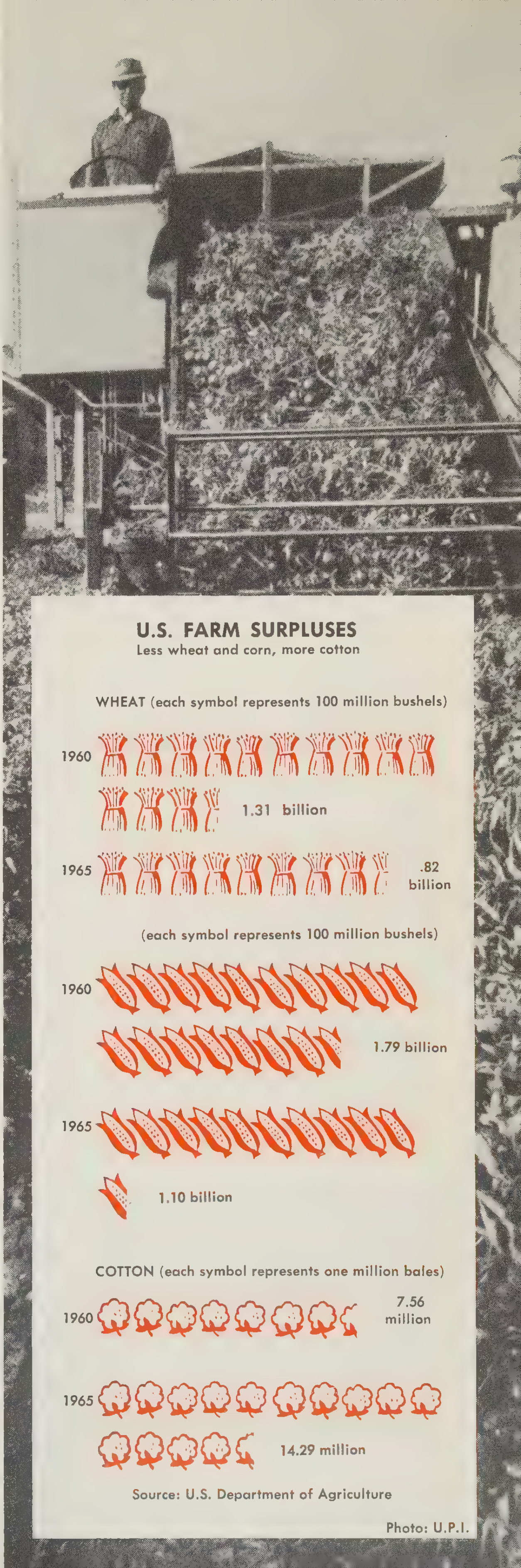
Rural Electrification Administration. The more than 1,000 electric systems financed by the Rural Electrification Administration (REA) showed continued strong growth in fiscal year 1965. They reached $1 billion in net assets, borrowed $380 million for expansion, and made a record number of rate cuts.

A total of 132,776 rural consumers received electric service for the first time as a result of the new REA financing, which brings total plant investment by REA electric systems to nearly $4.7 billion. Approved loans not yet invested in plant facilities will add an estimated 600,000 rural consumers and bring the 30-year total of REA loans to $5.6 billion. By the end of fiscal year 1965, the systems had made $2.26 billion in principal and interest payments. Interest alone totaled more than $726 million.

REA's active borrowers serve an estimated 20 million people in 46 states and Puerto Rico, living on more than half the nation's 3.4 million electrified farms.

Rate cuts, representing annual savings of more than $5 million, resulted from both growth and an increase in average monthly usage. Usage increased 122 kilowatt-hours (kw-hr) per customer between fiscal years 1960 and 1965.

The loan program also has provided financing for 5 million kilowatts of generating capacity—about 1% of the electric industry's total and enough to provide 18.2% of the total electric power needs of rural borrowers. The REA-financed companies buy 36.6%



U.S. FARM SURPLUSES

Less wheat and corn, more cotton

Source: U.S. Department of Agriculture

Photo: U.P.I.

of their power from commercial companies and 45.2% from public sources.

Rural telephone systems, eligible for REA loans since 1949, expanded to provide service to more than 2 million subscribers. The agency loaned $97 million to 170 cooperatives and commercial companies in the fiscal year 1965, increasing the 16-year total to almost $1.17 billion. The 848 REA telephone systems reported net assets of $112 million.

The rural telephone systems continued an accelerated program of upgrading service. This program included an expansion of single-party service as a result of investments of $101 million during the fiscal year 1965. Investment in rural telephone plant totals more than $1 billion. The telephone borrowers —623 commercial companies and 225 cooperatives— have made interest and principal payments totaling $185 million; interest alone totaled nearly $84 million.

Federal Crop Insurance Corporation. This corporation, which has provided financial protection against crop failure since 1939, continued to expand in 1965. It wrote insurance policies on $594 million in crop-production investments, as against $546 million in 1964. The 1965 insurance covered 455,618 crop investments on almost 16 million acres. This represented a gain of about 5,000 crop investments and one million acres over 1964. Insurance coverage protected farmers in 1,214 counties (27 more than the year before) in 36 states.

An estimated $34 million was paid in 1965—$4 million more than in the preceding year—to compensate 62,000 farmers whose crops did not return production costs. With the addition of sugar beets and tung nuts, policies were written on 23 types of crops. Some specialty crops, such as citrus fruits, raisins, cherries, and peaches, were insured only against such unusual hazards as freezing and wind damage.

Farm Credit System. An independent agency providing credit to farmers, ranchers, and cooperatives, the Farm Credit System had a record $7.9 billion in loans outstanding at the end of the fiscal year 1965. This was $932 million more than a year earlier and represented a 13.4% increase. The $6.6 billion loaned during the year—also a record—was $730 million more than in fiscal 1964. This 12.4% increase in new credit brought the loans outstanding total to an all-time high.

The Farm Credit System, supervised by the government and owned by farmers and cooperatives, is made up of 12 federal land banks and 735 affiliated federal land bank associations; 12 federal credit banks and 482 affiliated production credit associations; and 13 banks that provide credit to cooperatives. It raises loan funds by selling bonds and debentures on the open market.

Federal land bank associations under the Farm Credit System lent $1.2 billion to 58,908 farmers on long-term mortgages. At the end of fiscal year 1965, the association had $4.1 billion in 384,330 loans outstanding—$600 million more than a year earlier. *Production credit associations* lent $3.9 billion in short- and intermediate-term credit in fiscal year 1965, up 4.9% from the previous year. The *banks for cooperatives* made 2,488 loans totaling a record $1.3 billion, up 20.3% from fiscal year 1964. The bank loans outstanding at the end of fiscal year 1965 totaled $931 million, up 22.9% from a year earlier.

RAY REIMAN
President, Farm Business, Inc.

AIR FORCE

On Feb. 1, 1965, Gen. John P. McConnell succeeded Gen. Curtis E. LeMay as chief of staff of the U.S. Air Force. LeMay, who retired, was the last important World War II commander on active service. Gen. William H. Blanchard took over from McConnell as vice chief of staff.

Harold Brown, director of defense research and engineering, was sworn in as secretary of the Air Force on October 1. He succeeded Eugene M. Zuckert, who had been secretary since 1961. Zuckert and his undersecretary, Brockway McMillan, retired. Norman Paul, assistant secretary of defense for manpower, assumed the post that formerly had been held by McMillan.

Strategic Air Command (SAC). In 1965 the number of SAC missiles on alert exceeded for the first time the number of its manned bombers. There were over 850 ICBM's (Intercontinental Ballistic Missiles), about 600 B-52's, 80 B-58's, and a diminishing number of B-47's, which were being phased out of the inventory. The last of 800 Minuteman I ICBM's became operational on June 30, 1965. A month earlier, the Air Force had announced its plans for the eventual replacement of the Minuteman I with the larger, more powerful Minuteman II. When complete, the SAC Minuteman force will total 1,000 operational missiles. (See also MISSILES.)

Reconnaissance. The 4200th Strategic Reconnaissance Wing was activated in January 1965 at Beale Air Force Base, Calif.; it is to make preparations for receiving the SR-71, the world's most advanced strategic reconnaissance plane. The SR-71 will fly at more than three times the speed of sound and will operate at altitudes higher than 80,000 feet. In just one hour of flight it can cover an area of 60,000 square miles with its reconnaissance "eyes."

Tactical Air Command (TAC). After a massive four-year buildup, TAC had 15 wings in mid-1965, with more than 1,400 tactical fighters. This force, more than double its strength in 1961, includes a large number of F-4C Phantom II's, the newest member of the USAF jet inventory. TAC's assault airlift force also increased in size—from four to six wings, with two more programmed. There were more than 315 of the versatile C-130 Hercules in the inventory. Tactical reconnaissance was improved with the introduction of the RF-4C version of the Phantom II. The RF-4C is being equipped with advanced sensors, radar, and photographic equipment.

During the four-year period of expansion, TAC was equally busy improving combat capabilities, with particular emphasis on across-the-board support for the Army. The USAF Tactical Air Warfare Center is an outgrowth of this emphasis. Established in 1963, it was made a permanent facility in 1965.

Air Commando operations were expanded and underwent steady upgrading with the application of lessons learned in air operations in Vietnam. New methods of delivering supplies and rescuing personnel in dense jungles and in darkness were developed, and improved aircraft and armaments were tested and adapted. During the 1964–65 fiscal year, an accelerated training program produced more than 250 aircrews, comprising more than 600 personnel.

The 464th Troop Carrier Wing of TAC was awarded the MacKay Trophy for its part in rescuing some 1,500 refugees and hostages from Congolese rebels in November 1964. The mission was cited as a milestone in "precision employment of tactical air-power under unusually arduous conditions." Less

AFP FROM PICTORIAL PARADE

AIR FORCE B-52 Stratofortress bomber (*above*) pounds Vietcong guerrilla positions (*below*) in South Vietnam. B-52's are based on Guam, 2,500 miles east of Vietnam.

than six months later, TAC's assault airlift forces were again committed to an emergency, this time in the Dominican Republic. Together with the Military Air Transport Service (MATS) and Reserve units, the airlift forces transported some 20,000 passengers and over 18,000 tons of cargo.

Air Defense Command (ADC). Several developments increased the capability of this Air Force component of the U.S.-Canadian North American Air Defense Command (NORAD). On May 1, 1965, the YF-12A fighter-interceptor proved its high-speed cruise capability by setting seven world records, including speed over a straight course (2,062 mph.) and sustained flight at an altitude of 80,000 feet.

The existence of two antisatellite systems, operated by the Army and the Air Force, was revealed by President Johnson early in the 1964–65 fiscal year. The Air Force system, employing the Thor missile, is manned by ADC crews. The completion of these systems was termed a rare achievement, because the United States has in effect discouraged the development of an offensive weapon in space by perfecting an operational defensive capability in advance.

OTH (over-the-horizon) radar, also announced by the president, was called one of the most dramatic examples of new developments in national defense. OTH radar will detect missiles within seconds of launch at a distance of several thousand miles. While not replacing the Ballistic Missile Early Warning System (BMEWS), the new radar system will almost double the present 15-minute warning time of an ICBM attack.

Military Air Transport Service. MATS airlift crews were busy with joint airlift tests and mobility exercises, and weather, rescue, photomapping, and geodetic missions in every part of the world during 1965.

MATS, which changed its name to Military Airlift Command (MAC) on Jan. 1, 1966, participated in 15 exercises during 1965. Each exercise was designed to establish, test, and refine joint air-support doctrine. For the most part, however, tests and exercises were pre-empted by airlift demands resulting from the acceleration of the war in Vietnam and from U.S. military intervention in the Dominican Republic revolution.

Larger, more productive aircraft—such as the C-141, now coming into the inventory, and the C-5A, now under active development—will further improve airlift capability. A measure of its efficiency is the fact that the C-141 does the work of at least four C-124's. The C-5A, in turn, will be five times as productive as the C-141, with only a minor increase in operating cost. Weighing approximately 362 tons and having payload capacity of 132 tons, the C-5A will be able to operate from relatively primitive airfields when necessary, thanks to advancement in landing-gear design.

In December 1964, the Air Weather Service

WIDE WORLD

UPI

UPI

GEN. JOHN PAUL McCONNELL (*left*) succeeded Gen. Curtis E. LeMay as Air Force chief of staff in 1965. McConnell endorses Defense Secretary Robert McNamara's "cost effectiveness" program of applying managerial concepts of big businesses to the armed forces.

HAROLD BROWN (*right*), appointed secretary of the Air Force in 1965 to succeed Eugene Zuckert, was formerly director of defense research and engineering. As head of the Pentagon's huge research program, he played a vital part in new weapons development.

(AWS) of MATS received the first of 43 production models of a revolutionary new cloud radar, capable of determining the altitude and thickness of clouds up to 60,000 feet. As in previous years, AWS continued its upper-atmosphere sampling mission, in-depth meteorological support of the Air Force and other services, and support of NASA space activities.

The Air Rescue Service, another MATS subcommand, saved the lives of 125 persons and directly aided more than 1,300 others between mid-1964 and mid-1965. It joined the airlift force in providing many humanitarian missions in all parts of the world. Para-rescuemen of the Air Rescue Service also participated in space missions; they pulled the Gemini astronauts out of the water and deposited them safely aboard the Navy's carriers.

Air Force Systems Command. AFSC made notable contributions toward U.S. space programs. On June 18, 1965, the first Titan 3-C was successfully launched from Cape Kennedy to become the free world's mightiest space booster. The rocket has more than 2 million pounds of liftoff thrust.

Looking toward the future in space, AFSC is working on a fourfold spacecraft research program to develop unmanned test vehicles capable of maneuvering to a precision recovery site after reentering the earth's atmosphere. The START program (Spacecraft Technology and Advanced Reentry Tests) includes hypersonic flight tests of unmanned reentry vehicles. Five of six flight-test attempts in another program were completed on Feb. 23, 1965; they were called ASSET, for Aerothermodynamic/Elastic Structural Systems Environmental Tests. Study contracts for the Manned Orbiting Laboratory were placed with industry after the project was approved for development in August 1965.

The Air Force continued its close support of the National Aeronautics and Space Administration's projects. On March 23, 1965, a modified Air Force Titan 2 space booster launched the first two-man Gemini spacecraft (*Gemini 3*) into orbit. In the following months, other Titan 2 boosters successfully placed four more Geminis in orbit. The last two, *Gemini 6* and *Gemini 7*, rendezvoused in space on December 15. Tracking of NASA space launches and biomedical research conducted by the Air Force also provided essential elements of support for the national space program.

A scientific highlight of the year represented a significant step forward in the refinement of satellite geodesy technique. In January 1965, Air Force scientists bounced a laser beam off the orbiting Explorer 22 satellite and photographed the reflection. This technique will enable scientists to determine with greater precision the distances between two or more widely separated points on the earth's surface. This first successful laser experiment in satellite geodesy is being further developed into an operational system. (See SPACE EXPLORATION.)

The National Magnet Laboratory, located at the Massachusetts Institute of Technology and supported by the Air Force Office of Scientific Research, utilized a giant water-cooled magnet to produce the strongest continuous magnetic field generated by man: 255,000 gauss, or more than 100,000 gauss higher than ever recorded before. In comparison, the earth's magnetic field is about one-half gauss in strength. The development of the magnet opens a new era of high magnetic field research in several areas of physical science, including the magnetic, optical, electronic, and nuclear properties of matter.

Several milestones were reached in the development of advanced aeronautical systems. These included the early flights of the XB-70A and the F-111 tactical fighters, and continuing experiments with the X-15. The XB-70A, which flew for the first time on Sept. 21, 1964, later set a record for the highest gross takeoff weight in aviation history—more than 250 tons. After the first F-111A flight on Dec. 21, 1964, demonstrations of swept-wing and supersonic flight were made early in 1965. The X-15, extensively modified to increase its speed capability to mach 8, was flown by Capt. Joe Engle to more than 53 miles into space on June 29.

AFSC is developing two aircraft, the XC-142A and the X-19A, as part of a cooperative tri-service program to produce a new family of experimental VTOL (vertical takeoff and landing) aircraft. The XC-142A is the first vertical short takeoff and landing aircraft to be flown, and also the largest. It made its first hover flight in December 1964 and its first conversion flight in January 1965.

Manpower and Budget. At the end of fiscal 1965, the Air Force had 131,578 officers and 690,117 airmen on active duty. Over 22,000 officers and about 167,000 airmen were serving overseas. There were approximately 76,000 men in the Air National Guard and 193,000 men in the Air Force Reserve.

The military budget passed by Congress in August 1964 gave the Air Force $18.5 billion for fiscal 1965. In September 1964, Congress appropriated $351 million to build Air Force installations.

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AIRCRAFT AND AIRLINES. See AERONAUTICS.

ALABAMA

Civil rights controversies continued to trouble Alabamians in 1965. A march from Selma to Montgomery, by Negroes and whites who opposed barriers to the right to vote, was protected by the federal government. Among other developments, the Alabama Legislature grappled with reapportionment problems posed by the U.S. Supreme Court's "one man-one vote" rulings.

Voting Rights Drive. On January 18, Martin Luther King, Jr., under the auspices of the Southern Christian Leadership Conference, inaugurated a voter registration drive in Selma and Dallas County. After a series of sustained demonstrations, mass arrests, and minor violence, Federal District Judge Daniel H. Thomas, on February 4, ordered the Dallas County Board of Registrars to speed the registration of Negroes. On February 18, 50 state troopers broke up an assemblage of 400 Negroes and civil rights workers in Marion—an incident in which one Negro was killed.

After Congress passed a Voting Rights Act in August, federal registrars entered Alabama to sign up Negro voters in counties affected by the act. The act eliminated Alabama's literacy test as a prerequisite to voting.

ALABAMA · Information Highlights

Area: 51,609 square miles.
Population: 3,462,000 (1965 est.).
Chief Cities (1965 est.): Montgomery, the capital (148,000); Birmingham (345,000); Mobile (222,000); Huntsville (122,000); Tuscaloosa (71,000); Gadsden (56,000); Pritchard (49,000); Anniston (35,000).
Government: *Chief Officers*—governor, George C. Wallace (D); lt. gov., James Allen (D); secy. of state, Agnes Baggett (D); atty. gen., Richmond Flowers (D); treas., Mary Texas Hurt Garner; supt. of pub. instr., Austin Meadows; chief justice, J. Ed. Livingston. *Legislature* (convened May 4, 1965)—Senate, 35 members (0 Republicans, 35 Democrats); House of Representatives, 106 members (3 R, 102 D, others, 1).
Education: *School enrollment* (1964–65)—public elementary, 482,000 pupils (15,070 teachers); public secondary, 376,000 (13,800 teachers); nonpublic schools, 34,300 pupils (1,270 teachers); college and university (fall 1964), 56,182 students. *Public school expenditures* (1964–65)—$226,000,000 ($288 per pupil); average teacher's salary, $4,775.
Public Finance (fiscal year 1964): *Revenues,* $779,817,637 (4% sales tax, $140,851,791; motor fuel tax, $83,868,218; federal funds, $181,321,841). *Expenditures,* $776,276,082 (education, $220,310,572; health, welfare, and safety, $161,636,191; highways, $155,055,300). *State debt,* $301,659,000 (Sept. 30, 1964).
Personal Income (1964): $5,959,000,000; average annual income per person, $1,749.
Public Assistance (fiscal year 1965): $113,714,502 to 149,535 cases (aged, $91,378,157; dependent children, $10,553,852).
Labor Force (employed persons, July 1965): *Agricultural,* 89,500; *nonagricultural* (wage and salary earners), 1,060,900 (26% manufacturing, 16% trade, 16% government). *Unemployed persons* (July 1965)—45,100.
Manufacturing (1963): Value added by manufacture, $2,342,124,000 (transportation equipment, $142,593,000; primary metals, $509,274,000; nonelectrical machinery, $55,546,000; electrical machinery, $37,553,000; fabricated metals, $133,728,000; food and products, $201,265,000).
Agriculture (1964): *Cash farm income,* $634,155,000 (livestock, $343,529,000; crops, $263,125,000; govt. payments, $27,501,000). *Chief crops* (tons)—corn, grain, 1,320,000 (ranks 16th among the states); cottonseed, 361,000 (rank, 5th); peanuts, 129,200; (rank, 3rd); potatoes, 113,000 (rank, 19th); sweet potatoes, 23,100 (rank, 11th); peaches, 7,200 (rank, 20th); hay, 744,000.
Mining (1964): *Production value,* $235,690,000 (rank, 20th). *Chief minerals* (tons)—Coal, 14,435,000 (ranks 8th among the states); iron ore, 2,359,000 (rank, 5th); lime 599,000 (rank, 8th); stone, 15,852,000; clays, 1,991,000; petroleum, 8,498,000 barrels.
Fisheries (1964): *Commercial catch,* 15,066,833 pounds ($3,974,469). *Leading species*—shrimp, 7,214,738 pounds ($2,629,814); red snapper, 2,392,875 pounds ($685,133); blue crab, hard, 1,761,725 pounds ($110,335); oysters, 1,005,260 pounds ($324,125).
Transportation: *Roads* (1964), 66,557 miles (31,401 paved); *motor vehicles* (1964), 1,529,876; *railroads* (1964), 5,207 track miles; *airports,* 90 commercial and municipal.
Communications (1965): *Telephones,* 1,122,600; *television stations,* 13; *radio stations,* 152; *newspapers,* 20 (daily circulation, 1,828,446).

WIDE WORLD

A CIVIL RIGHTS RALLY in front of the Alabama State Capitol in Montgomery on March 25 climaxed a march from Selma. The Rev. Martin Luther King addressed the crowd.

WIDE WORLD

GEORGE C. WALLACE, the governor of Alabama, encountered setbacks in 1965. He opposed the adoption of the federal Voting Rights Act, which promised to add Negroes to the rolls. He attempted to prevent a civil rights march from Selma to Montgomery, but the federal government intervened. Meanwhile, integration of the Alabama public schools proceeded steadily. He sought to amend the Alabama Constitution, which forbids a governor to seek reelection. The House passed the proposed amendment, but it failed in the Senate.

Wallace was born in Clio, Ala., on Aug. 25, 1919. He graduated from the University of Alabama Law School in 1942, and flew missions over Japan during World War II. He served in the legislature after the war. As judge of the Third Judicial Circuit from 1953 to 1959, he defied the federal Civil Rights Commission. He was elected governor in 1962. In 1963 he attempted but failed to prevent racial integration at the University of Alabama.

Selma-to-Montgomery March. On March 7 a major confrontation took place at Selma between Negroes, headed by King, and state troopers and sheriff's deputies. A scheduled march to Montgomery by 500 Negroes was broken up in a violent melee. On March 9 the Reverend James J. Reeb, a white Unitarian minister from Boston, was struck by a club as he left a Negro café. He died two days later. (On December 10, three Selma men were acquitted of his murder.)

The federal government sought an injunction barring interference with peaceful demonstrations, and hearings were held before Federal District Judge Frank M. Johnson in Montgomery. A conference between President Lyndon Johnson and Governor George Wallace on March 13, requested by the governor, failed to bring an agreement on the scheduled march. On March 17, Judge Johnson held that the Negroes had a constitutional right to march in order to petition the governor with regard to voting rights. Then, in a televised address to the Alabama Legislature, Governor Wallace sought to dramatize the need for the federal government to assume responsibility for the safety and welfare of the marchers.

On March 20 the president federalized the Alabama National Guard and authorized the use of regular Army troops to provide protection and to maintain the public safety. The five-day march from Selma to Montgomery (March 21–25) culminated in a rally at the edge of the Capitol grounds.

On March 25, the last day of the march, another civil rights-connected killing took place. Mrs. Viola Gregg Liuzzo, the wife of a Detroit Teamsters Union official, was shot as she drove along a highway in Lowndes County. The first trial of Collie Leroy Wilkins, who was charged with the murder of Mrs. Liuzzo, ended in a hung jury on May 7. On October 22, Wilkins' second trial resulted in his acquittal despite the dramatic prosecution by Attorney General Richmond Flowers. However, three members of the Ku Klux Klan, including Wilkins, were convicted in federal court on December 9 on charges of conspiring to deprive Mrs. Liuzzo of her civil rights. On September 30, Thomas L. Coleman, a deputy sheriff of Lowndes County, was acquitted by a jury for the August 20 slaying of Jonathan M. Daniels, a seminary student. (See also CIVIL RIGHTS.)

Legislative Developments. In February the legislature was called into special session by the governor to consider educational matters. A tax-supported, free textbook program for students in the first eight grades of the public schools was enacted. A record educational appropriation of $459 million for the next biennium was approved. On March 4 the legislature convened in regular session, faced with federal court orders to correct the existing pattern of congressional districts and state legislative apportionment. After a bitter fight the legislature realigned the congressional districts, in the process dividing Jefferson County (Birmingham) into three districts. The legislators also passed a water pollution measure, created a new department of mental health, increased pay for state employees, appropriated $5 million for junior colleges and trade schools, and approved a $25 million highway bond issue.

In September, Governor Wallace called a special session to reapportion the legislature. He declared: "We feel it far better for this to be done by the legislature than by the courts." The legislature passed a measure that increased the seats for urban areas in both the House and the Senate. But the formula for apportionment of the House proved unacceptable to a three-judge federal panel, and on October 3 this panel modified the apportionment.

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ALASKA

The resurgence of Alaska in 1965, after the devastating earthquake of March 1964, has surprised even the Alaskans.

Recovery from Earthquake Damage. President Johnson reported to Congress in August 1965 that the federal government had provided Alaska with more than $336 million in grants and loans, averaging $1,360 for each citizen. He said that Alaska had substantially recovered from the effects of the quake, and that "the destiny of our 49th state is again bright with promise." He reported that $163 million had been given in the form of direct grants, and $97 million in loans to individuals, business firms, and other organizations. The remainder of the funds went to repair damaged federal facilities. He noted that the fishing industry had increased its catch by 100 million pounds, valued at $1,600,000. The per capita annual income in Alaska had risen from $2,850 at the time of the disaster to $3,154 in 1965—an increase of 11%.

Although highway damage amounted to an estimated $75 million, and 27.4% of the bridges on the primary and secondary roads had to be replaced, highway repairs were virtually completed in 1965. Airports have been restored, the Alaska Railroad returned to full schedule with new equipment, most schools were repaired or rebuilt, and docks and harbors were either expanded or being repaired.

Anchorage ranked first among the cities in terms of expenditures for reconstruction—$27 million. Seward was second, with $20 million, and Valdez third. The entire village of Valdez was moved a few miles to a safer location. Numerous other com-

SCANDINAVIAN CLUB—BAR
LOANS
ARC

STEVE MCCUTCHEON, GAMMA PICTURE AGENCY

ALASKA'S RECOVERY from the earthquake of March 27, 1964, has been rapid. Fourth Avenue in the business district of Anchorage, reduced to ruins by the earthquake (*above*), has been almost completely rebuilt (*right*). The First National Bank Office Building appears at the left.

munities also required a great deal of rehabilitation.

Legislation. In the first session of the 1964–65 legislature, which met from Jan. 25, 1965, to April 9, 1965, Democrats held 17 of the 20 seats in the Senate and 30 of the 40 seats in the House of Representatives.

The legislature appropriated $161 million for the 1966 fiscal year. State employees' wages were increased 7%. Other bills created a Commission on Human Rights, provided for the training of mentally retarded and physically handicapped children, and removed the cause of disputes between borough boards and local school boards.

Governor William Egan issued a proclamation in September redistricting the state Senate in accordance with federal court interpretations. Although Anchorage gained four seats and Fairbanks one, southeastern Alaska, where these cities are located, lost most in the redistricting.

Fisheries. Alaskan fishermen had a good year in 1965, although the run of pink salmon in southeastern Alaska fell below expectation. In the Bristol Bay area the pack was 1,449,346 cases of "48 one-pound talls." The total catch of 24 million red salmon almost equaled the record catch of 1938. The halibut catch was expected to exceed 60 million pounds, and the price for halibut was the highest on record.

Petroleum. The production of petroleum and natural gas is the most recent stimulus to the Alaskan economy. Five oilfields are to begin producing in 1966. One well in Cook Inlet has a daily production of 2,500 barrels. Petroleum receipts from state bonus bids, state rentals and royalties, and federal rentals and royalties increased $2 million in the fiscal year, to a total of almost $16 million.

Forest Products. Alaska's tremendous forest resources are being more heavily developed. Timber-product exports increased 5.4% in the first five months of 1965 over the same period in 1964. In December 1965 the U.S. Forest Service arranged for a huge 50-year sale of pulp lumber from the North Tongass National Forest. It is estimated that nearly 9 billion board feet will be sold. A new pulp plant costing more than $50 million is to be installed by July 1971.

Tourism. The number of tourists visiting Alaska continued to increase in 1965. The three ferries

ALASKA · Information Highlights

Area: 586,400 square miles.
Population: 247,000 (1965 est.).
Chief Cities (1964 est.): Juneau, the capital (7,200); Anchorage (49,000); Fairbanks (14,000); Spenard (12,000); Ketchikan (6,500); Sitka (3,200); Kodiak (2,600); Nome (2,300); Seward (1,900).
Government: *Chief Officers*—governor, William A. Egan (Democrat); lt. gov., none; secy. of state, Hugh J. Wade (D); atty. gen., Warren C. Colver (D); treas., Robert D. Stevenson; comm. of educ., William T. Zahradnicek; chief justice, Buell A. Nesbett. *Legislature* (convened Jan. 25, 1965); Senate, 20 members (17 Democrats, 3 Republicans); House of Representatives, 40 members (30 D, 10 R).
Education: *School enrollment* (1964–65)—public elementary, 41,400 pupils (1,592 teachers); public secondary, 21,100 pupils (883 teachers); nonpublic schools, 2,400 pupils (140 teachers); college and university (fall 1964), 4,209 students. *Public school expenditures* (1964–65)—$35,040,000 ($643 per pupil); average teacher's salary, $8,360.
Public Finance (fiscal year 1965): *Revenues,* $150,986,519 (federal funds, $92,863,110; motor fuel tax, $6,003,785). *Expenditures,* $152,660,588 (highways, $72,309,951; education, $35,845,017; health, welfare, and safety, $15,226,446). *State debt,* $36,737,000 (June 30, 1965).
Personal Income (1964): $779,000,000; average annual income per person, $3,116.
Public Assistance (fiscal year 1964): $6,109,000 (aged, $1,146,000; dependent children, $1,847,000).
Labor Force (employed persons, 1964): *Agricultural,* 731; *nonagricultural* (wage and salary earners), 65,400 (7% manufacturing, 14% trade, 46% government). *Unemployed persons,* 7,898 (March 1965).
Manufacturing (1963): Value added by manufacture, $89,311,000 (lumber and wood, $9,592,000; food and products, $43,194,000).
Mining (1964): *Production value,* $65,947,000 (ranks 38th among the states). *Chief minerals* (tons)—gold, 58,416 tr. oz. (rank, 7th); sand and gravel, 26,089,000; coal, 745,000; peat, 2,350; petroleum, 11,059,000 barrels.
Fisheries (1964): *Commercial catch,* 490,746,000 pounds ($57,293,000). *Leading species* (1963)—pink salmon, 125,117,000 pounds ($14,472,000); king crab, 78,740,000 pounds ($7,607,000); chum or keta salmon, 35,748,000 pounds ($3,046,000); red or sockeye salmon, 35,456,000 pounds ($7,644,000).
Transportation: *Roads* (1963), 6,230 miles (2,825 paved); *motor vehicles* (1964), 100,113; Alaskan *railroads* (1965), 995 track miles; *civil aircraft* (1964), 2,725 (549 airports).
Communications: *Telephones* (1965), 59,000; *television stations* (1964), 5; *radio stations* (1964), 16; *newspapers* (1965), 7 (1964 daily circulation, 61,941).

that provide daily service to southeastern Alaska reported traffic increases between fiscal years 1964–65 and 1965–66 of 12.8% in the number of passengers and 17.2% in the number of vehicles. Visitors to the Mendenhall Glacier Visitors Center, near Juneau, exceeded 43,000, or 18,000 more than in the preceding season.

Construction. Big new motels and improved docks and canneries are numerous in Alaska. In Anchorage the 150-room, 8-story luxury hotel, the Captain Cook, and the 400-room, 15-story Anchorage Westward Hotel have been completed, and J.C. Penney's, the city's largest department store, has been completely rebuilt. A new lumber mill at Haines, with an annual capacity of 25 million board feet, replaced the mill that the earthquake destroyed at Whittier. A chip and cant mill with a capacity of 40 million board feet was placed in operation at Wrangell.

Centenary. The Centennial Commission initiated plans for the 100th anniversary of the purchase of "Alaska, the Great Land" from Russia in 1867. Commemorative buildings, exhibits, and museums are included among the scheduled highlights.

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ALBANIA

Albania, the smallest and least known of the East European Communist states, has been the only one that has consistently backed Communist China in its ideological struggle with the Soviet Union.

Foreign Policy. Albania continued to denounce both the Soviet Union and the United States in 1965. In January, an editorial in *Zeri i Popullit* (*The Voice of the People*), the country's Communist party newspaper, branded the successors of Soviet Premier Nikita Khrushchev as "revisionists" who harmed the international Communist movement by following his interpretations of Marxist-Leninist teachings.

Albania refused to attend a January meeting of the East European countries that adhere to the Warsaw Pact. Albania then released the text of a letter, sent to the other members of the Warsaw Pact, that accused the Soviet Union of trying to weaken Albania militarily and economically. In March, Albania shunned a conference in Moscow attended by Communists from 19 countries. At an international teachers conference in Algiers in April, and at a world peace congress in Helsinki in July, Albanian delegates joined Chinese Communists in criticizing the Soviet Union. Albania's close relations with Communist China were underscored by Premier Chou En-lai's visit to Tiranë in March.

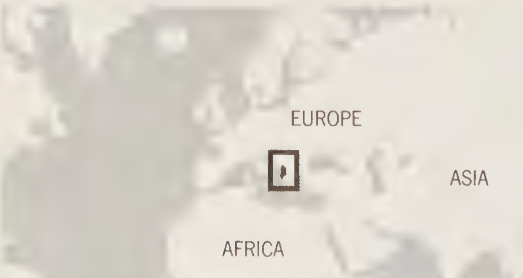
Albania followed the lead of Communist China in denouncing American policy in Vietnam. In July, Ramiz Alija, a secretary of the Albanian Labor (Communist) party, warned that the Communists might impose a blockade to force the United States to withdraw from Vietnam; and in August the official Albanian news agency deplored President Johnson's decision to dispatch more U.S. troops to Vietnam.

Albania also displayed its ill will toward the United States and the Soviet Union at the United Nations. In February, the Albanian delegate to the General Assembly, Halim Budo, plunged the United Nations into turmoil by proposing that the Assembly resume normal procedure in voting. The Assembly had been seeking to forestall a confrontation between the Soviet Union and the United States, which had contended that countries more than two years in arrears on their United Nations assessments should not be permitted to cast votes. The United States indicated that it would not raise the arrears question during a procedural vote on Budo's proposal. The Assembly upheld, by a 97–2 vote, a ruling by its president that the Albanian motion was out of order.

In September, Budo accused the United States of trying to hinder the work of the General Assembly and of attempting to dominate the Congo (Léopoldville), Vietnam, and the Dominican Republic. U.S. Ambassador Arthur J. Goldberg denied these allegations.

Domestic Developments. Internally, the country is controlled by the Albanian Labor party and its first secretary, Gen. Enver Hoxha, who has been the most important political figure since 1946. The third five-year plan, begun in 1961 with the objective of increasing the country's industrial production, continued with the aid of Chinese advisers. There were indications that the Albanian consumer was beginning to demand goods of higher quality and greater variety. In response, a trend toward decentralization of industry and artisan cooperatives

ALBANIA · Information Highlights



Area: 11,097 square miles.
Population: 1,814,000 (mid-1964 est.).
Chief Cities: Tiranë, the capital, 140,300 (1961 est.); Shkodra, 43,305 (1960 census); Vlora, 41,423 (1960); Durrsi, 39,937 (1960).
Government: *Chairman of the Presidium*—Haxhi Lleshi; *Premier*—Maj. Gen. Mehmet Shehu; *Communist Party First Secretary*—Enver Hoxha; *Parliament*—National Assembly (214 members, all of the Albanian Labor Party).
Religious Faiths: Muslims, 65% of population; Orthodox Christians, 25%; Roman Catholics, 10%.
Education: *Literacy rate* (1955)—71.5% of population aged 9 and over. *Total school enrollment* (1962–63)—327,894 (primary, 291,575; secondary, 11,170; teacher-training, 10,267; technical/vocational, 6,572; higher, 8,310).
Finance (1965 est.): *Revenues,* $684,000,000; *expenditures,* $672,000,000; *monetary unit,* lek (5 leks equal U.S.$1).
Crops (metric tons): Cottonseed (1963), 15,000; wheat (1962), 146,000; maize (1962), 131,000.
Manufacturing (metric tons): Cement (1964), 140,000; gasoline (1962), 49,000; sugar (1964), 12,000.
Minerals (metric tons, 1964): nickel, 3,500 (ranks 6th among world producers); lignite, 300,000; chromite (1963), 281,000 (world rank, 6th); iron ore, 350,000; copper, 2,540; crude petroleum, 5,338,000 barrels.
Foreign Trade (1963): *Exports,* $48,000,000 (chief exports, 1962: fuels, minerals, metals, $25,760,000; foodstuffs, $10,144,000; organic raw materials, $2,740,000); *imports,* $71,000,000 (chief imports, 1962: machinery and equipment, $17,986,000; fuels, minerals, metals, $14,400,000; raw materials for food industry, $8,654,000); *chief trading partners* (1962): Communist China (took 29% of exports, supplied 65% of imports); Czechoslovakia (took 25% of exports, supplied 13% of imports); Poland (took 12% of exports, supplied 5% of imports).
Transportation: *motor vehicles* (1963), 7,100 (automobiles, 2,200); *railways* (1963), 65 miles; *merchant vessels* (1964), 8 (33,000 gross registered tons).
Communications: *Telephones* (1964): 6,000; *television stations* (1964), 1; *television sets* (1964), 1,000; *radios* (1963), 69,000; *newspapers* (1963), 2 (daily circulation, 87,000).

was evident. In August, Albania instituted a new currency at the rate of one new lek to 10 old leks. New coins and bills were issued, and wages and prices were recomputed at a 10-to-1 ratio.

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ALBERTA

Alberta, Canada's westernmost prairie province, showed a marked economic advance in 1965. Progress was particularly notable in the north.

Economy. Major oil discoveries at Rainbow Lake focused attention on Alberta's hitherto neglected northwest corner. In the northeast, work proceeded on a $210,000,000 project to extract oil from the tar sands and on a highway and a pipeline to Edmonton. The provincial government let contracts for a 100-mile railway from Edmonton to the northeast to tap untouched natural resources. The opening of a 50-mile freeway completed a limited-access highway between Edmonton and Calgary.

Alberta's grain harvests, although damaged by wet fall weather, found ample export markets.

Government. In the November federal elections, the Conservative party increased its share of Alberta's 17 parliamentary seats to 15. However, Harry Hays, federal minister of agriculture and Alberta's only member of the cabinet, was defeated.

Indians. A march on Edmonton in January by 111 Slave Indians emphasized the housing, welfare, and other needs of Alberta's Indians and Métis.

Education. Educational growth was marked at all levels. Many new vocational schools were opened, and additions made to others built in recent years.

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ALBERTA · Information Highlights

Area: 255,285 square miles.
Population: 1,454,000 (Oct. 1, 1965 est.).
Chief Cities (1964 est.): Edmonton, the capital (311,804); Calgary (294,924); Lethbridge (36,722); Medicine Hat (25,271); Red Deer (24,446).
Government: *Chief Officers*—Lt. gov., J. Percy Page; premier and atty gen., Ernest C. Manning (Social Credit party); prov. secy., Ambrose Holowach (S.C.); prov. treas., A.O. Aalborg (S.C.); min. of educ., R.H. McKinnon (S.C.); chief justice, Sidney Bruce Smith. *Legislature*—Legislative Assembly (convened Feb. 18, 1965), 63 members (party seating: 60 Social Credit, 2 Liberal, 1 Coalition).
Education: *School enrollment* (1964–65 est.)—public elementary, 204,622; public secondary, 146,284; private (elementary and secondary, 1963–64 est.), 6,436; Indian (1963–64), 4,281; university, 13,000. *Public school expenditures* (1963)—$153,835,000; average teacher's salary, $5,681.
Public Finance (fiscal year 1965 est.): *Revenues*, $320,600,000 (income tax, $54,832,000; sales tax, $42,000,000; federal funds, $14,040,000). *Expenditures*, $333,320,000 (education, $106,220,000; health and welfare, $100,320,000; transportation and communications, $61,390,000).
Personal Income (1964): $2,568,000,000; average annual income per person, $1,793.
Public Assistance (fiscal year 1965 est.): $33,470,000 (aged and blind, $11,670,000; dependents and unemployed, $15,390,000).
Labor Force (1961 census): Agricultural, 104,162; manufacturing 41,249.
Manufacturing (1962): Value added by manufacture, $392,985,000 (transportation equipment, $14,962,000; primary metals, $14,448,000; nonelectrical machinery, $5,646,000; electrical products, $3,931,000; fabricated metals, $38,216,000; food and products, $105,820,000).
Agriculture (1964 est.): *Cash farm income*, $600,524,000 (livestock, $291,836,000; crops, $303,568,000; government payments, $4,466,000). *Chief crops* (cash receipts)—wheat, $165,120,000 (ranks 2nd among the Canadian provinces); barley, $39,887,000 (rank, 1st); flaxseed, $12,027,000 (rank, 3rd); potatoes, $2,524,000 (rank, 6th).
Mining (1964 est.): *Production value*, $747,348,396. *Chief minerals* (tons)—sand and gravel, 16,558,448 (ranks 3rd among the Canadian provinces); cement, 771,361 (rank, 3rd); coal, 2,875,635 (rank, 2nd); salt, 101,400 (rank, 3rd); crude petroleum, 175,230,500 barrels (rank, 1st); natural gas, 1,184,041,600 thousand cubic feet (rank, 1st).
Transportation: *Roads* (1962), 70,445 miles (53,532 surfaced); *motor vehicles* (1963), 560,490; *railroads* (1963), 5,683 miles; *airlines* (1963), 4 (39 airports).
Communications (1963): *Telephones*, 448,001; *television stations*, 8; *radio stations*, 24; *newspapers*, 7 (daily circulation, September 1964, 280,330).

ALCOHOLIC BEVERAGES. See Brewing Industry; Distilling Industry.

ALGERIA

The coup d'état of June 19 dominated events in Algeria in 1965. Following rumors that President Ahmed Ben Bella was plotting to remove Col. Houari Boumedienne, minister of defense and major spokesman for the Algerian National Liberation Army, Boumedienne and a group of officers arrested Ben Bella. A 26-member Council of the Revolution became the "supreme political body" and appointed Boumedienne as its president. Boumedienne later became premier of a 20-man cabinet. He undertook an "Algeria first" policy, steering a middle course between East and West—seeking aid from both camps and warning against interference from either.

The Coup. Many factors contributed to a growing disaffection among the officers who had enabled Ben Bella to take power in 1962. In 1964, Ben Bella had taken control of the Ministry of the Interior, the provincial governments, and the police, and had placed planning, finance, and communications under his personal supervision. There also were indications that he hoped to organize the 300,000 war veterans to counter the army's influence.

COL. HOUARI BOUMEDIENNE, 40-year-old leader of Algeria, seized power from President Ahmed Ben Bella in a military coup on June 19, 1965. A fervent Muslim and nationalist, Boumedienne served as army leader, vice president, and defense minister under Ben Bella. He organized the coup with maximum efficiency and minimum bloodshed, and became president of Algeria's revolutionary council on July 5. Five days later he named a new 20-member cabinet with himself as premier and defense minister.

Boumedienne was born Mohammed Boukharouba in Guelma, Algeria, in 1925. (The pseudonym Boumedienne was adopted during the Algerian war for independence from France in 1954–62.) He is said to have been converted to violent nationalism during the Muslim uprising of 1945. While attending Al-Azhar University in Cairo, Egypt, in the early 1950's, he met Ben Bella, who was planning the Algerian insurrection. He joined the National Liberation Army in 1955, and was considered Ben Bella's chief supporter.

ALGERIAN LEADER Boumedienne (left) confers with Communist Chinese Foreign Minister Chen Yi in September.

UNITED PRESS

ALGERIA · Information Highlights

EUROPE
ASIA
AFRICA

Area: 919,590 square miles.
Population: 12,300,000 (mid-1964 est.).
Chief Cities (1960 census): Algiers, the capital, 722,066; Oran, 350,087; Constantine, 169,071; Annaba, 135,150.
Government: *President and Premier*—Col. Houari Boumedienne (took power June–July 1965). *Council of the Revolution*, 26 members.
Religious Faiths: Muslims, 84% of population; Roman Catholics, 6%; others, 10%.
Education: *Total school enrollment* (1962)—922,870 (primary, 849,767; secondary, 49,118; teacher-training, 623; technical, 20,618; higher, 2,744).
Finance (1964): *Revenues*, $504,000,000,000; *expenditures*, $533,000,000; monetary unit, dinar (4.937 dinars=U.S.$1).
Gross Domestic Product (1959): $2,854,000,000.
National Income (1959): $2,368,000,000; average annual income per person, $220.
Economic Indexes: *Industrial production* (1961), 110 (1958=100); *agricultural production* (1964), 99 (1956–57=100); *cost of living* (1961), 119 (1958=100).
Manufacturing (metric tons, 1963): Wine, 1,258,000; cement (1964), 730,000; wheat flour, 484,000; natural gasoline, 241,000; olive oil (1964), 24,000; tobacco, 2,670.
Crops (metric tons): Citrus (1964), 405,000 (ranks 12th among world producers); grapes (1963), 1,622,000 (world rank, 8th); wheat (1963), 1,580,000; barley (1963), 950,000; oats (1962), 32,000; leaf tobacco (1964), 12,500.
Minerals (metric tons, 1963): Crude petroleum, 182,806,000 barrels (ranks 9th among world producers); diatomite (1964), 17,600 (world rank, 10th); zinc, 36,000 (world rank, 20th); natural gas, 14,715,000 cubic feet; gypsum (1964), 177,000; salt, 130,000.
Foreign Trade (1963): *Exports*, $700,000,000 (chief exports: raw materials, agricultural products, crude petroleum, wine, citrus fruits, iron ore, fresh vegetables); *imports*, $800,000,000 (chief imports: foodstuffs, machinery, transport equipment, textiles). *Chief trading partners* (1963): France (supplied 70% of imports); U.S. (supplied 6% of imports); Italy (supplied 2% of imports).
Transportation: *Roads* (1964), 25,690 miles; *motor vehicles* (1964), 283,000 (automobiles, 198,000); *railways* (1963), 2,440 miles; *merchant vessels* (1964), 1 (3,000 gross registered tons); *principal airports*—Algiers, Bône, Oran.
Communications: *Telephones* (1964): 159,479; *television stations* (1964), 6; *television sets* (1964), 100,000; *radios* (1963), 1,500,000; *newspapers* (1963), 7.

This consolidation of power alarmed the military. Ben Bella reportedly confided in Col. Tahar Zbiri that Boumedienne would also be removed, and the officers decided to remove the president instead. Ben Bella was placed in an unknown prison in the Sahara, and later was moved to a former psychiatric ward of an Algiers hospital. His great popularity among students provoked riots in Algiers, Oran, Bône, and Constantine, but the army quickly brought the situation under control.

A declaration by Boumedienne immediately after the coup made it clear that the military had considered removing Ben Bella for some time, and the ease of doing so indicated that it had been well planned. The declaration attacked Ben Bella's "personal power" and protested the steady decline of Algeria under his rule. There were also signs that the military resented the strong influence of Egyptian and Russian advisers on Ben Bella.

The New Regime. In addition to Boumedienne and Zbiri, the key figures in the coup were Abdelazis Bouteflika, who became the new foreign minister, and Ahmed Kaid, a famous internal chief of revolutionary forces, once known as "Commandant Slimane," who became finance minister. In the 20-man cabinet announced on July 5, 1965, two prominent persons were held over from the Ben Bella government: Bachir Boumaza, as information minister, and Ali Mahsas, as agriculture minister.

The new cabinet had the full support of the well-organized 50,000-man army, the largest in Africa. Boumedienne declared that Algiers needed no help "from abroad on how to build socialism," and Foreign Minister Bouteflika warned diplomats against "interference in Algeria's internal affairs." The most important domestic issues were finding employment for revolutionary veterans, and persuading peasants to deliver their wheat to government warehouses in order to feed the people during the winter. A new system of price supports was announced, but few crops were delivered because of a lack of confidence in the government that goes back to the attainment of independence.

Foreign Affairs. By far the most important international development in Algeria in 1965 was the postponement of an Afro-Asian summit conference to be held near Algiers. Originally scheduled for June 29, the conference was first moved back until November 5, and then postponed indefinitely. The Ben Bella government had reportedly spent $12 million to refurbish the Club des Pins, once a French officers club, for the meeting.

Plans for the conference were confused even before the coup d'état because of feuds between Communist China and the Soviet Union, India and Pakistan, and Indonesia and Malaysia. The Boumedienne government officially favored holding the summit conference, but left the decision to the assembled foreign ministers, who announced the indefinite postponement on November 2. (See AFRICA.)

Economy. A major factor in the coup was the steady deterioration of the Algerian economy since independence. None of the factories promised by Ben Bella had been completed, and only 24% of the industrial credits appropriated for 1964 were used. Taxes were seldom collected, and inflation mounted as both French residents and Algerians placed their capital in European banks. Without oil revenues of about $80 million a year and annual French aid of $300 million, the Algerian government would have been bankrupt.

The French, determined to preserve good relations with Algeria, continued talks with officials of the new Algerian government on revising the oil and gas accord of 1962, and a new agreement was signed on June 29, 1965. Algeria was permitted to purchase all firms exploiting the huge gas reserves of the Sahara, and to buy a larger share of the French oil companies operating in the Sahara. The accord also gave Algeria assurance of an additional $400 million in French aid over a five-year period, and scheduled tax increases on French firms that would increase oil revenues to $240 million a year. Though regarded as highly favorable to Algeria, the accord forestalled the absolute nationalization of French firms, as promised by Ben Bella.

The United States recognized the Boumedienne government on July 6 and continued its assistance of about $25 million a year. The Soviet Union promised $227 million in aid, and Communist China, $50 million.

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ALLERGIES

The progress of research laboratory work and the practical application of its results led to significant advances in the field of allergy in 1965. Facilities for training medical students and physicians in this specialty were improved.

Approximately 20 million Americans are hypersensitive to at least one of hundreds of normally harmless substances. The Allergy Foundation of America estimated in 1965 that 25 million man-days of work are lost each year because of allergies.

Research. The role of the thymus in immunity, tolerance, and hypersensitivity is a prominent research project promising to yield important new information. Successful efforts to fractionate gamma globulin have been made. This leads to better knowledge of the nature of antibodies and the mechanism of the antigen-antibody reaction. Continued efforts are being made to discover the relationships and differences between the immediate and delayed types of allergic reactions.

Autosensitivity, autoantibodies, and the so-called autoimmune antibodies have been studied intensively. It was recognized previously that these three factors can play an important role in adverse reactions to transfusions, pregnancies, and skin graftings. It now is apparent that they also are important subjects for study in order to find ways to transfer organs successfully from person to person (homotransplantation).

The body normally has methods of defense to repel any foreign invader, but sometimes the body responses are inappropriate (rejection of a transplanted organ) or are misguided and self-destructive (autoimmune disease).

Other subjects of investigation included the role of lymphocytes and the lymphatic system in the interaction between antigens and antibodies, and the role of hypersensitivity in infectious diseases. Findings from the studies on hypersensitivity may help specialists who are seeking ways to control flare-ups of allergy after colds, sinus attacks, and bronchitis.

Treatment. Fatal body reactions to penicillin injections and to a single sting of an insect are being studied, and measures for their control are being worked out. A study committee of the American Academy of Allergy, collecting data from every part of the United States, records more than 3,000 cases of sensitivity to insect sting. Immunization against severe reactions to insect stings has been very effective, and persons can obtain protection by this treatment.

Training and Information. Specialists are taking intensive courses on allergy so that they can provide more help for patients. The training program is directed by the postgraduate committee of the American Academy of Allergy and the American College of Allergists.

The Allergy Foundation of America supports postdoctoral research fellowships in the fields of immunology, microbiology, and allergy. It also prepares and distributes pamphlets on all aspects of allergy, including the environmental conditions that are favorable to allergic individuals, and answers inquiries on the subject.

(See also MEDICINE.)

COMMITTEE FOR PUBLIC EDUCATION
ALLERGY FOUNDATION OF AMERICA

ALLIANCE FOR PROGRESS. See LATIN AMERICA.

ALUMINUM

Sparked by product innovation and economic growth, the North American aluminum industry was expected to set new production and shipment records in 1965 for the fourth year in a row.

Production. The output of primary aluminum in 1964 totaled a record 2,552,747 tons in the United States, 835,000 tons in Canada, and 16,500 tons in Mexico. North America's record output accounted for nearly half the estimated world aluminum production of 6,718,000 tons. Production in 1965 was expected to total about 2,750,000 tons in the United States, 825,000 tons in Canada, and 20,000 tons in Mexico.

Industry Expansion. The primary aluminum capacity in North America was expanded to an estimated 3,687,000 tons in 1965, an increase of about 230,400 tons, or nearly 7%, above the 1964 capacity. Approximately 135,000 tons of this increase represented additional potlines, with the balance achieved through the modernization of existing installations. The Aluminum Company of America completed the second of two new 35,000-ton-capacity potlines at its Warrick smelter near Evansville, Ind., thereby increasing its total rated capacity by nearly 127,000 tons. Consolidated Aluminum Corp. expanded its smelter at New Johnsonville, Tenn., by 32,000 tons.

Stockpile. The U.S. government and the Alcoa, Kaiser, Olin Mathieson, and Reynolds aluminum companies reached agreement on Nov. 23, 1965, for the sale of the excess government aluminum stockpile totaling nearly 1.4 million tons. The agreement calls for the sale of a minimum of 150,000 tons by the end of 1966, and of 100,000 to 200,000 tons annually thereafter. The exact sale quantity will be determined by defense needs.

Shipments and Markets. Net U.S. shipments of aluminum ingot and mill products (including primary, secondary, and imported metal) to consuming markets in 1964 totaled a record 3,590,000 tons. Shipments in 1965 were expected to increase by 10% or more.

Both the building and transportation industries used record amounts of aluminum in 1965 and were the two largest U.S. markets. Use of aluminum in automobiles averaged 70 pounds in the 1965 models.

The fastest-growing aluminum market continued to be the container and packaging industries. The use of aluminum in containers—especially as cans, easy-open can ends, and tear-off closures—made substantial gains in the packaging of beer, soft drinks, frozen juices, meats, baby food, and similar products. Aluminum shipments to this market increased from 50 million pounds in 1960 to more than 570 million pounds in 1964.

Exports. In 1964 the leading exporters of primary aluminum in the free world continued to be Canada (627,992 tons), Norway (291,894), the United States (208,622), France (131,970), Cameroon (50,544), and Austria (37,326). The largest free world exporters of semifabricated products in 1964 were: Belgium-Luxembourg (94,959 tons), the United States (82,444), West Germany (67,314), Britain (52,720), France (48,664), and Canada (28,838). (See also MINING.)

STANLEY V. MALCUIT
Chief Economist, Aluminum Company of America

AMBASSADORS AND ENVOYS

The following is a list of ambassadors and envoys from and to the United States as of Dec. 31, 1965. Diplomatic designations are as follows: A—ambassa-

PICTORIAL PARADE

WIDE WORLD

UPI

NEW U.S. AMBASSADORS: Henry Cabot Lodge (*left*, shown taking oath from Secretary of State Rusk) went to Vietnam for a second time; former Postmaster General John A. Gronouski (*above left*) was appointed to Poland; and Patricia Harris, the first U.S. Negro woman to be named ambassador, was sent to Luxembourg.

dor extraordinary and plenipotentiary; C—consul; CA—chargé d'affaires; CE—counselor of embassy; CG—consul general; E—envoy extraordinary and plenipotentiary.

Country	*From U.S.*	*To U.S.*
Afghanistan	John M. Steeves (A)	Abdul Majid (A)
Algeria	John D. Jemegan (A)	Cherif Guellal (A)
Argentina	Edwin M. Martin (A)	Norberto M. Barrenechea (A)
Australia	....	John Keith Waller (A)
Austria	James W. Riddleberger (A)	Ernst Lemberger (A)
Belgium	Ridgway B. Knight (A)	Baron Louis Scheyven (A)
Bolivia	Douglas Henderson (A)	Julio Sanjines-Goytia (A)
Brazil	Lincoln Gordon (A)	Jorge de Carvalho e Silvo (CA)
Bulgaria	Nathaniel Davis (E)	Luben Guerassimov (E)
Burma	Henry A. Byroade (A)	U Maung Maung Soe (CA)
Burundi	Donald A. Dumont (A)	Léon Ndenzako (A)
Cameroon	Leland Barrows (A)	Paul Bamela Engo (CA)
Canada	W. Walton Butterworth (A)	Charles S.A. Ritchie (A)
Central African Republic	Claude G. Ross (A)	Michel Gallin-Douathe (A)
Ceylon	Cecil B. Lyon (A)	Oliver Weerasinghe (A)
Chad	Brewster H. Morris (A)	Boukar Abdoul (A)
Chile	Ralph A. Dungan (A)	Radomiro Tomic (A)
China (Taiwan)	Jerauld Wright (A)	Chow Shu-kai (A)
Colombia	Covey T. Oliver (A)	Eduardo Uribe (A)
Congo (Léopoldville)	G. McMurtrie Godley (A)	Joseph Ugolin Nzeza (CA)
Costa Rica	Raymond Telles (A)	Gonzalo J. Facio (A)
Cyprus	Taylor G. Belcher (A)	Zenon Rossides (A)
Czechoslovakia	Outerbridge Horsey (A)	Karel Duda (A)
Dahomey	Clinton E. Knox (A)	Louis Ignacio-Pinto (A)
Denmark	Katharine E. White (A)	Torben Rønne (A)
Dominican Republic	W. Tapley Bennett, Jr. (A)	Marco A. de Peña (CA)
Ecuador	Wymberley De R. Coerr (A)	Gustavo Larrea Cordova (A)
El Salvador	Raul H. Castro (A)	Ramón de Clairmont-Dueños (A)
Ethiopia	Edward M. Korry (A)	Tashoma Haile-Mariam (A)
Finland	Tyler Thompson (A)	Olavi Munkki (A)
France	Charles E. Bohlen (A)	Bruno de Leusse (CA)
Gabon	David M. Bane (A)	Aristide N.E. Issembe (A)
Gambia	Mercer Cook (A)	....
Germany, West	George C. McGhee (A)	Heinrich Knappstein (A)
Ghana	Franklin H. Williams (A)	Miguel Augustus Ribeiro (A)
Great Britain	David K.E. Bruce (A)	Sir Patrick Dean (A)
Greece		Alexander A. Matsas
Guatemala	John O. Bell (A)	Carlos García-Bauer (A)
Guinea	James I. Loeb (A)	Karim Bangoura (A)
Haiti	Benson E.L. Timmons III (A)	André Theard (A)
Honduras	Joseph J. Jova (A)	Ricardo Midence Soto (A)
Hungary	....	János Radványi (CA)
Iceland	James K. Penfield (A)	Petur Thorsteinsson (A)
India	Chester Bowles (A)	Braj Kumar Nehru (A)
Indonesia	Marshall Green (A)	Lambertus N. Palar (A)
Iran	Armin H. Meyer (A)	Khosro Khosrovani (A)
Iraq	Robert C. Strong (A)	Nasir Hani (A)
Ireland	Raymond R. Guest (A)	William P. Fay (A)
Israel	Walworth Barbour (A)	Avraham Harman (A)
Italy	G. Frederick Reinhardt (A)	Sergio Fenoaltea (A)
Ivory Coast	George A. Morgan (A)	Konan Bédié (A)
Jamaica	....	Sir Neville Noel Ashenheim (A)
Japan	Edwin O. Reischauer (A)	Ryuji Takeuchi (A)
Jordan	Robert G. Barnes (A)	Farhan Shubeilat (A)
Kenya	William Attwood (A)	Burudi Nabwera (A)
Korea, South	Winthrop G. Brown (A)	Hyun Chul Kim (A)
Kuwait	Howard R. Cottam (A)	Talat Al-Ghoussein (A)
Laos	William H. Sullivan (A)	Tiao Khampan (A)
Lebanon	Dwight J. Porter (A)	Ibrahim Hussein El-Ahdab (A)
Liberia	Ben H. Brown, Jr. (A)	S. Edward Peal (A)
Libya	David D. Newsom (A)	Fathi Abidia (A)
Liechtenstein	Howard Elting, Jr. (CG)	....
Luxembourg	Patricia R. Harris (A)	Maurice Steinmetz (A)
Malagasy Republic	C. Vaughan Ferguson, Jr. (A)	Louis Rakotomalala (A)
Malawi	Sam P. Gilstrap (A)	Vincent Horatius Bonar Gondwe (A)
Malaysia	James D. Bell (A)	Dato Ong Yoke Lin (A)
Mali	C. Robert Moore (A)	Moussa Léo Keita (A)
Malta	George J. Feldman (A)	....
Mauritania	Geoffrey W. Lewis (A)	Ahmed-Baba Miske (A)
Mexico	Fulton Freeman (A)	Hugo B. Margáin
Monaco	George D. Whittinghill (CG)	....
Morocco	Henry J. Tasca (A)	Ahmed Laraki (A)
Nepal	Henry E. Stebbins (A)	Padma Bahadur Khatri (A)
Netherlands	William R. Tyler (A)	Carl W.A. Schurmann (A)
New Zealand	Herbert B. Powell (A)	George R. Laking (A)
Nicaragua	Aaron S. Brown (A)	Guillermo Sevilla-Sacasa (A)
Niger	Robert Joseph Ryan (A)	Ary Tanimoune (A)
Nigeria	Elbert G. Mathews (A)	N. Ade Martins (A)
Norway	Margaret J. Tibbetts (A)	Hans Kristian Engen (A)
Pakistan	Walter P. McConaughy (A)	Ghulam Ahmed (A)
Panama	Charles W. Adair, Jr. (A)	Ricardo M. Arias Espinosa (A)
Paraguay	William P. Snow (A)	Juan Plate (A)
Peru	J. Wesley Jones (A)	Celso Pastor (A)
Philippines	William McC. Blair, Jr. (A)	Oscar Ledesma (A)
Poland	John A. Gronouski (A)	Edward Drozniak (A)
Portugal	George W. Anderson, Jr. (A)	Vasco Vieira Garin (A)
Rumania	Richard H. Davis (A)	Petre Bălăceanu (A)
Rwanda	Charles D. Withers (A)	Celestin Kabanda (A)
Saudi Arabia	Herman F. Eilts (A)	Ibrahim Al-Sowayel (A)
Senegal	Mercer Cook (A)	Ousmane Socé Diop (A)
Sierra Leone	Andrew V. Corry (A)	Gershon B.O. Collier (A)
Somali Republic	Horace G. Torbert, Jr. (A)	Ahmed Mohamed Adan (A)
South Africa	William M. Rountree (A)	H.L.T. Taswell (A)
Spain	Angier B. Duke (A)	The Marquis de Merry del Val (A)
Sudan	William H. Weathersby (A)	Khalifa Abbas El-Obeid (A)

Country	*From U.S.*	*To U.S.*
Sweden	J. Graham Parsons (A)	Hubert de Besche (A)
Switzerland	W. True Davis, Jr. (A)	Alfred Zehnder (A)
Syria	Hugh H. Smythe (A)	Dia Allah El-Fattal (CA)
Tanzania	John H. Burns (A)	Raphael Lukindo (CA)
Thailand	Graham A. Martin (A)	Sukich Nimmanheminda (A)
Togo	William Witman II (A)	Robert Ajavon (A)
Trinidad and Tobago	Robert G. Miner (A)	Sir Ellis Emmanuel Innocent Clarke (A)
Tunisia	Francis H. Russell (A)	Rachid Driss (A)
Turkey	Raymond A. Hare (A)	Turgut Menemencioğlu (A)
Uganda	Olcott H. Deming (A)	Solomon Bayo Asea (A)
USSR	Foy D. Kohler (A)	Anatoliy F. Dobrynin (A)
United Arab Republic	Lucius D. Battle (A)	Mostafa Kamel (A)
Upper Volta	Thomas S. Estes (A)	John Borema Kabore (A)
Uruguay	Henry A. Hoyt (A)	Juan Felipe Yriart (A)
Venezuela	Maurice M. Bernbaum (A)	Enrique Tejera-Paris (A)
Vietnam, South	Henry Cabot Lodge (A)	Tranh Thien Khiem (A)
Yemen	....	Mohsin A. Alaini (A)
Yugoslavia	C. Burke Elbrick (A)	Veljko Micunovic (A)
Zambia	Robert C. Good (A)	Hosea Josias Soko (A)

AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS. See LABOR.

AMERICAN LIBRARY ASSOCIATION

Both President Johnson and the Congress focused attention in 1965 on the library needs of the United States. Significant legislation supported by the American Library Association (ALA) and passed by Congress included the Elementary and Secondary Education Act of 1965, which authorized $100 million for library books and facilities, and the Higher Education Act of 1965, which provided for college library resources and for library training and research. In addition, Congress approved a new Library Services and Construction Act appropriation of $55 million. (See EDUCATION.)

Annual Conference. The 84th annual conference of the ALA was held in Detroit in July 1965. At the meeting, the association accepted $75,000 (to be matched by ALA funds) from the H.W. Wilson Foundation, Inc., to establish an office for the recruitment, education, and employment of librarians.

New officers were installed at the conference. The president is Robert Vosper, librarian, University of California at Los Angeles; first vice-president and president-elect, Mary V. Gaver, professor, Graduate School of Library Service, Rutgers University; second vice-president, Rutherford D. Rogers, librarian, Stanford University; treasurer, Ralph Blasingame, Jr., associate professor, Graduate School of Library Service, Rutgers.

Other Meetings. Four ALA-sponsored conferences in 1965 reflected major library concerns and activities. At a meeting in Warrenton, Va., representatives of 54 national organizations discussed urgent library needs in relation to educational developments. At the Intellectual Freedom Conference, held in Washington, D.C., delegates developed a program of action for librarians threatened with abridgment of the principles set forth in the Library Bill of Rights. Librarians attending the Legislative Workshop in Washington, D.C., studied the legislative process at local, state, and national levels. At a meeting in Detroit devoted to the theme, "National Inventory of Library Needs—1965," it was learned that many libraries are below ALA standards regarding the number of volumes, the size of staff, and the amount of operating expenditures. Studies revealed that $3.7 billion is needed to meet basic standards.

Activities. As part of the J. Morris Jones-*World Book Encyclopedia*-ALA Goals Award, the Public Library Association received $17,855 in order to publish a new edition of *Public Library Service.*

Library Technology Reports, a bimonthly publication launched in January 1965, offers information on library equipment, supplies, and systems. A film entitled . . . *And Something More,* produced by the ALA Knapp School Libraries Project, won a Golden Eagle award of the Council on Nontheatrical Events, Inc. The film was also a winner at the American Film Festival, sponsored by the Education Film Library Association.

For the second year of the New York World's Fair, the ALA, together with the American Documentation Institute and the Special Libraries Association, continued to sponsor a library exhibit at the United States Pavilion. In addition to an information center, the exhibit comprised a collection of books selected for the White House library, taped book reviews, and a children's reading area and theater.

Awards. Bertha Margaret Frick, former associate professor of the Columbia University School of Library Service, received the 1964 Melvil Dewey Medal for creative professional achievement. Mrs. Frances Clarke Sayers, former lecturer at the UCLA School of Library Service, won the 1965 Joseph W. Lippincott Award of $1,000 for distinguished service.

The Beta Phi Mu Award for service in education for librarianship went to Jesse H. Shera, dean of the School of Library Science, Western Reserve University. The Grolier Award of $1,000 for outstanding contributions to young people's reading went to Sarah Lewis Jones, chief library consultant of the Georgia State Department of Education.

Roberta Bowler, retired assistant librarian of the Los Angeles Public Library, won the Scarecrow Press Award for Library Literature. The *PLNA Quarterly,* edited by Eli M. Oboler, received the H.W. Wilson Library Periodical Award.

Maia Wojciechowska won the Newbery Medal for *Shadow of a Bull.* The Caldecott Medal went to Beni Montresor for *May I Bring a Friend?* Sterling North's *Rascal* won the 1963 Aurianne Award.

Katharine G. Harris, of the Detroit Public Library, received the Isadore Gilbert Mudge Citation, and Laura C. Colvin, of Simmons College, was honored with the Margaret Mann Citation. Perrie Jones, former librarian of the St. Paul (Minn.) Public Library, won the Association of Hospital and Institution Libraries Exceptional Service Award. The first person to earn the new Armed Forces Librarians Section Achievement Citation was Helen E. Fry, U.S. Army staff librarian, Fort Sam Houston. (See also PRIZES AND AWARDS.)

Special Grants. For study in children's librarianship, the Library Binding Institute awarded a scholarship of $1,000 to Barbara Ellen Wunder, Ohio State University Library. A $1,500 scholarship was granted to Mrs. Mary Ann Stevenson of Ann Arbor, Mich., by the Frederic G. Melcher Scholarship Fund. Mrs. Joan Allene Parmeter Nolan, Ambler (Pa.) Public Schools, received the $1,000 E.P. Dutton-John Macrae Award for advanced library work.

The ninth annual Grolier-Americana scholarships of $1,000 each went to the graduate library program at Western Michigan University and to the undergraduate program at Illinois State University. (See also LIBRARIES.)

EDWARD G. STRABLE
Executive Secretary, Reference Services Division
American Library Association

AMERICAN LITERATURE

The year 1965 was disappointing from a literary point of view. In fiction and in poetry, while some worthwhile books were published, there were few manifestations of exciting new talent and few books which added substantially to the reputations of established writers. However, a justifiable stir greeted the appearance, late in the year, of a long work by a new novelist, Marguerite Young. Her book, *Miss MacIntosh, My Darling,* was probably the most important creative work of an undistinguished year. Perhaps the closest thing to a literary controversy was the divergent criticism in reviews of Norman Mailer's *An American Dream,* but this discussion died down quickly, and the book made its way to the best-seller lists.

The situation was somewhat better in the fields of history and literary criticism. But even there, most public attention centered on the sensational aspects of topical books like those about the Kennedy administration by former presidential aides Theodore Sorensen and Arthur M. Schlesinger, Jr., rather than on the more substantial works of such historians as Samuel Eliot Morison, Bruce Catton, and Daniel Boorstin.

Saul Bellow and Shirley Ann Grau won the major 1965 literary prizes for American fiction. Bellow received the National Book Award and also the International Prize for Literature for his 1964 novel *Herzog;* Miss Grau was awarded the Pulitzer Prize for fiction for her novel *The Keepers of the House,* also published in 1964. John Berryman won the 1965 Pulitzer poetry award for *77 Dream Songs* (1964). (See PRIZES AND AWARDS.)

Novels. Marguerite Young's book was the product of 17 years' labor, and it is a large and impressive work, deserving of the comparisons reviewers made to Joyce, Faulkner, and Melville. Centered around four characters who are human even though sometimes grotesque, *Miss MacIntosh, My Darling* moves without awkwardness between fantasy and reality, exploring the paradoxes and complexities of contemporary American life. In the words of William Goyen, who reviewed the book for the New York *Times* on September 12, the author "has found, surely, instinctively and in her own time, her grand metaphor; and it glistens and radiates and *exists* in this colossal shape as hard and as concrete as the truth itself. It is a masterwork."

MARGUERITE YOUNG hugs manuscript of her 1965 novel *Miss MacIntosh, My Darling,* which took 17 years to write.

VYTAS VALAITIS

Norman Mailer's fourth novel, *An American Dream,* was a real disappointment. In spite of the author's unquestioned skill as a writer, the new book is ridden by clichés of the "tough" school of modern fiction, and it relies far too heavily on melodramatic effects and explicit delineation of sexual episodes. In view of Mailer's great talent and his oft-stated desire to be one of the giants of American fiction, *An American Dream* is a disastrous revelation of the author's weaknesses.

John Updike's short novel *Of the Farm* was his best novel since *Rabbit, Run* (1960). More pointed and less discursive than his earlier fiction, *Of the Farm* centers on the encounter of a 35-year-old man, his wife and her son, and the man's mother. The characters are strongly established, and the action is believable.

Two of the most interesting novels of the year were late entries by writers who have made critical reputations in the past, but who have not yet established contact with a wide public. Peter Matthiessen, in *At Play in the Fields of The Lord,* made use of his professional knowledge of anthropology to tell the story of a primitive South American tribe which an American Indian tries to help resist the encroachments of civilization; the attempt fails, but it provides the plot for an unusual and provocative novel. George P. Elliott's *In the World* is the study of a group of people who have to come to terms with the lives that they have made for themselves; Elliott succeeds in showing the dangers of retreating into fantasy, whether it is grim or appealing.

Another novel of considerable interest was William Humphreys' *The Ordways,* the tale of an Odyssey-like search through old Texas by a father looking for a lost son. Skillfully written, sometimes humorous and sometimes pathetic, *The Ordways* is to some degree flawed by the author's overly obvious indebtedness to such masters as Faulkner and Katherine Anne Porter; even so, the book is a considerable accomplishment.

The prolific Wright Morris produced *One Day,* a study of the lives of ordinary people in a small California town on the day of President Kennedy's assassination. Although affecting and occasionally funny, the book was one of Morris' less successful attempts to find significance in the lives of common people. Irwin Shaw's *Voices of a Summer Day* was an exercise in nostalgia: the story of a man looking back over a happy and relatively uneventful life. Herman Wouk's *Don't Stop the Carnival* was an uninspiring potboiler about a group of dull people at a Caribbean resort. Peter de Vries produced another of his half-serious, half-comic fictions in *Let Me Count the Ways,* a book too much like others he has written in the past.

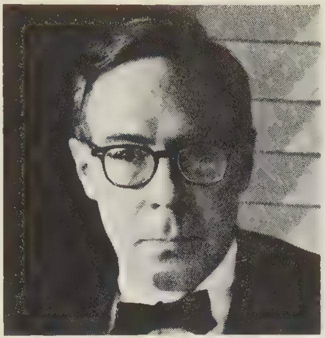
Frederick Buechner's characters, in *The Final Beast,* move in a kind of shadowland between dream and reality. Although the novel has murky suggestions of mysticism, on one level it is a realistic study of a widowed minister trying to make a life for himself and his motherless children.

Among the younger writers, C.D.B. Bryan attracted some attention with *P.S. Wilkinson,* a story of a young Korean War veteran trying to find a means of living in modern American society. While serious and perceptive, the book is often superficial and pretentious. In *A Covenant with Death,*

STEPHEN W. FRISCH, BLACK STAR

SAUL BELLOW, acclaimed by many critics as the foremost living American novelist, won his second National Book Award and the International Prize for Literature in 1965 for his novel *Herzog* (1964). As in his earlier novels *The Adventures of the Rain King* (1959), Bellow describes the attempt of the hero to accept himself and to survive in a confusing, often hostile world.

Born in Lachine, Quebec, on July 10, 1915, Bellow came from a Russian-Jewish immigrant family and was raised in Montreal and Chicago. He graduated from Northwestern University in 1937 with honors in anthropology. While doing graduate work, he realized he wanted to write. His first published novel was *Dangling Man* (1944). His third, *The Adventures of Augie March*, established his critical reputation and won the National Book Award in 1954. Bellow married Susan Glassman in 1961.



DANIEL A. LINDLEY

JOHN BERRYMAN, winner of the 1965 Pulitzer poetry prize, has been described by the poet and critic John Malcolm Brinnin as "a superb and difficult poet" of "absolute first rank" in the United States. Berryman's award-winning volume was *77 Dream Songs* (1964), whose hero "reacts with hopeless merriment" to the "brutality and stupidity that parades through his life and times." It is the writer's most important work since his long poem *Homage to Mistress Bradstreet* (1956).

Berryman was born in McAlester, Okla., on Oct. 25, 1914. He graduated from Columbia University in 1936 and has combined teaching at various universities with writing poetry, short stories, and criticism. His first poems appeared in magazines in the 1930's; his first volume of verse was *The Dispossessed* (1948). In 1950 he published a biography, *Stephen Crane*. Berryman married Eileen P. Mulligan in 1942.

JOHN HOWARD

SHIRLEY ANN GRAU won the 1965 Pulitzer fiction award for her third novel, *The Keeper of the House*, which was published in 1964. Like her previous works, it is set in her native South. It deals with racial problems, contrasting a fear-ridden society with the love of a white man and a Negro woman. Miss Grau's first book, a collection entitled *The Black Prince and Other Stories*, appeared in 1955 and was enthusiastically received by critics. However, her first two novels, *The Hard Blue Sky* (1958) and *The House on Coliseum Street* (1961), met with mixed critical reviews.

Miss Grau was born in New Orleans on July 8, 1929. She attended Booth School in Montgocery, Ala., and then went to Newcomb College of Tulane University, in New Orleans. She received her degree in 1950. The year that her first book was published, she was married to James Kern Feibleman.

Stephen Becker dealt more successfully with a more modest subject, the problem of a young judge faced with a serious and complicated legal question, whose answer is not to be found in any law book.

A husband and wife team, writing under the name K.B. Gilden, produced a best-seller, *Hurry Sundown*. It is a massive, two-volume examination of the fabric of contemporary life in the South, with special emphasis on racial relationships. Written in a rather plodding style, the book achieves its effects through the accumulation of an enormous amount of detail.

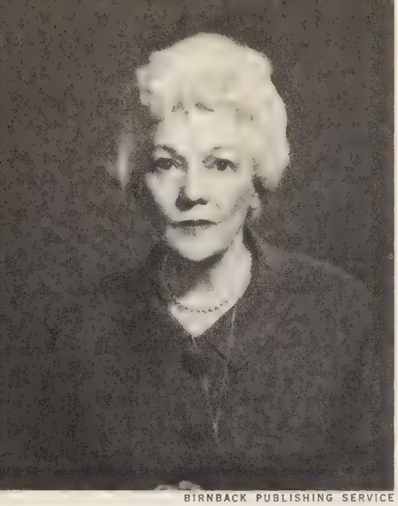
Relations between white men and Negroes concerned other novelists as well. Two important fictional treatments of the subject were published in 1965. Jesse Hill Ford's *The Liberation of Lord Byron Jones* describes characters who live in a small Southern town and are driven by forces they have set in motion but cannot control. John Hersey's *White Lotus* is an allegory set in some future time when white men have become the slaves of the yellow race, but Hersey's obvious subject is the history of the Negro's treatment in America. Earnest and concerned though the author obviously is, the novel is too crude and didactic to be successful fiction.

Other topical novels by young writers included *Up the Down Staircase* by Bel Kaufman. An account of life in a contemporary urban high school, it avoids sensationalism without trying to make an ugly picture pretty. A very different subject, the lives of Americans in Special Forces units in Vietnam, attracted the attention of Robin Moore in *The Green Berets*. The book's revelations caused some controversy.

Short Fiction. The most important volume of short fiction published in 1965 was *The Collected Stories of Katherine Anne Porter*. It is made up almost entirely of stories and short novels published in earlier collections, but four stories are collected here for the first time. The book serves as a valuable reminder that Miss Porter, with her matchless style and her deep concern for such themes as betrayal and death, is probably the finest writer of short fiction. It is upon these stories, rather than her 1962 novel *Ship of Fools*, that Miss Porter's reputation is securely founded.

Another important volume collected works of a woman writer of an earlier generation. Mildred R. Bennett has edited *The Collected Short Fiction, 1892–1912* of Willa Cather. These stories, written before the novels which made her famous, show in embryo the themes and attitudes which were to inform Miss Cather's later work. The collection is especially valuable because it brings to public attention stories virtually unknown until now.

James Baldwin's *Going to Meet the Man*, a collection of stories written over a period of several years, shows the same power but also the same uneven quality that characterizes his longer fiction.



BIRNBACK PUBLISHING SERVICE

KATHERINE A. PORTER had her *Collected Stories* published in 1965. The volume brought together three prior collections and four other stories.

Other short-story volumes worthy of mention include Oliver LaFarge's *The Door in the Wall,* which is primarily concerned with the American Indians in whom LaFarge was so interested; John O'Hara's *The Horse Knows the Way,* stories in the well-worn manner of this veteran; Richard G. Stern's *Teeth, Dying, and Other Matters,* which shows that Stern is not yet as comfortable with the short story as with the novel; R.V. Cassill's *The Father and Other Stories;* and a mixed bag from Irwin Shaw, *Love on a Dark Street.*

Poetry. Despite the appearance of some promising new talents, the poetry published in 1965 was lacking in distinction. Typical was W.H. Auden's weakest volume in many years, *About the House.* While his humorous honesty lightens some of the poems, they are for the most part pedantic and overly concerned with trivial matters. Too serious to be successful light verse, the poems are too cranky to be taken seriously. Two more modest books of lighter verse were Roger Shattuck's *Half Tame* and Lincoln Kirstein's *Rhymes of a PFC.*

Other established poets who did little in 1965 to enhance their reputations include Jean Garrigue, whose *Country Without Maps* showed the absence of a firm grip on its materials. *The Narrative Poems of Mark Van Doren* demonstrate once again that the narrative form is not a comfortable one for modern poets, although Van Doren handles it as well as any contemporary. Randall Jarrell, who died in 1965 (see biographical sketch in NECROLOGY), published a collection called *The Lost World,* in which he showed that he had been unable to break away from the mannered style of his earlier work. Hayden Carruth was represented by *Nothing for Tigers: Poems 1959–1964.*

Several younger poets deserve special mention. Robert Duncan, in *Roots and Branches,* displayed an improving talent which may yet make him a major poet. David Ignatow, in *Figures of the Human,* made use of the language of ordinary speech, but demonstrated his ability to create striking effects. Donald Finkel displayed a vigorous style in *Simeon,* while Vern Rutsala turned a disapproving eye on American urban life in *The Window.* A.R. Ammons showed promise in two books of verse, *Tape for the Turn of the Year* and a collection of short but impressive poems, *Corson's Inlet.* James Dickey published *Buckdancer's Choice,* and Irving Feldman produced *Pripet Marshes and Other Poems.*

Literary History and Criticism. In the field of literary history, several important books dealt with the American heritage. In *Mark Twain and the Gilded Age,* Bryan Morey French published an interesting study of an important phase in the development of one of the greatest American writers. An influential magazine was the subject of two books, Nicholas Joost's *Schofield Thayer and The Dial: An Illustrated History,* and William Wasserstrom's *The Time of The Dial.* Millicent Bell contributed valuable insights into a famous literary friendship in *Edith Wharton and Henry James: The Story of Their Friendship.* Miss Wharton was also one of several novelists discussed with sympathy and perception by novelist Louis Auchincloss in *Pioneers and Caretakers: A Study of Nine American Women Novelists.*

There were several interesting studies of important literary figures of the 20th century. One of the most valuable was Chad Powers Smith's *Where the Light Falls: A Portrait of Edwin Arlington Robinson,* a definitive study of the tragic life of a great, if neglected, poet. W.A. Swanberg tried, in *Dreiser,* to explain why the novelist moved through several literary and political worlds during his lifetime; the result unfortunately was somewhat superficial. Another naturalistic novelist was the subject of Richard O'Connor's *Jack London.* Malcolm Goldstein's *The Art of Thornton Wilder* is perhaps overly long, but it is the most thorough study of this dedicated artist. A famous group of writers, including John Crowe Ransom, Allen Tate, and Robert Penn Warren, was the subject of John L. Stewart's *The Burden of Time: The Fugitives and Agrarians,* a sympathetic study of the talented group which formed at Vanderbilt University during the late 1920's.

Among the interesting collections of literary criticism was Leo Marx's study of the influence of the industrial revolution on American literature, *The Machine in the Garden: Technology and the Pastoral Ideal in America.* Philip Rahv presented a number of his critical articles in *The Myth and the Powerhouse;* Frederick W. Dupee published *The King of the Cats and Other Remarks on Writers and Writing;* and Lionel Trilling was represented by *Beyond Culture.*

In the field of literary autobiography two books were outstanding, both centering on the turbulent depression decade before World War II. Alfred Kazin's *Starting Out in the Thirties* is an interesting account of one of the most distinguished American critical careers. The historian and critic Granville Hicks was the author of *Part of the Truth,* which discusses his life as a writer and teacher.

History and Biography. The flood of books about the Kennedy years continued unabated, with controversy centering around two books by close associates of the late president. Theodore Sorensen's *Kennedy* was generally acclaimed as the honest but tactful record of the author's association with John F. Kennedy, beginning when the latter was a freshman congressman and culminating in the presidency. Arthur M. Schlesinger, Jr., came in for much hostile comment because of his assertion, in *A Thousand Days,* that Kennedy had planned to drop Dean Rusk as secretary of state after the 1964 elections. There was widespread feeling that the revelation was harmful to Rusk's present position. Among other books dealing with the late president and his family, the most interesting was probably Richard J. Whalen's *The Founding Father: The Story of Joseph P. Kennedy,* an unflattering look at the patriarch of an amazing family.

A more wide-ranging and substantial work that also attracted a great deal of attention was Samuel Eliot Morison's *The Oxford History of the American People,* in which the veteran historian turned his attention from military chronicles to the broader subject of the American past. As Morison is both an excellent historian and an interesting writer, his book is the best one-volume study in its field.

An unusually large number of interesting studies dealt with more specific aspects of American history. A basic book in the study of the Revolutionary War was *The Peacemakers: The Great Powers and American Independence* by Richard B. Morris. It is a solidly documented account of the negotiations of Franklin, Adams, and Jay, leading to the Peace of Paris (1783). The frontier and the Old West received a good deal of attention. With *The Final Challenge: The American Frontier, 1804–1845,* Dale van Every concluded *The Frontier People of America,* a four-volume study of the years of colonization from 1754 until 1845. The latter part of the same period was the subject of Daniel Boorstin's *The Americans: The National Experience,* the second of a projected three-volume study of U.S. economic and political history.

The Lewis and Clark expedition (1803–06), which did so much to open the West to settlers, was the center of attention in George Dillon's *Meriwether Lewis: A Biography* and in Donald Jackson's edition of *The Letters of the Lewis and Clark Expedition.* Harry Sinclair Drago wrote about a later time in *Great American Cattle Trails,* and Philip Durham and Everett L. Jones told a forgotten story in *The Negro Cowboy.*

As the Civil War Centennial (1961–65) finally came to a close, Bruce Catton concluded his massive three-volume *Centennial History of the Civil War* with the publication of *Never Call Retreat.* The entire work is certainly one of the finest comprehensive studies of the subject, and the third volume is especially noteworthy because in it Catton seems less intoxicated by the glory and pomp of the war, and more deeply aware of its tragic aspects.

Other Civil War studies included *Lincoln's Scapegoat General: A Life of Benjamin F. Butler,* a sympathetic account of the life of the man known in the South as "Beast" Butler, by Richard S. West, Jr. Richard C. Wade contributed a chilling account of the life of slaves in urban centers, *Slavery in the Cities: The South, 1820–1860.* A further contribution to revisionist attempts to correct mistaken ideas about conditions after the war was Kenneth M. Stampp's *The Era of Reconstruction, 1865–1877.*

The early decades of the 20th century provided material for several very different books. Arthur S. Link published the 4th volume of his definitive study, *Wilson, Confusion and Crisis, 1915–1916.* The later judicial career of the man whom Wilson replaced in the White House drew the attention of Alpheus Thomas Mason in *William Howard Taft: Chief Justice.* The book emphasizes the irony of Taft's meddling in foreign and domestic affairs after his appointment to the Supreme Court, and shows that he was more willing to use executive power as chief justice than he had been as president. The history of the Industrial Workers of the World, a labor organization active in the United States in the first decades of the 20th century, is revealed in the unusual and striking *Rebel Voices: An I.W.W. Anthology,* edited by J.N. Kornbluh.

Among the books on aspects of World War II, Kenneth S. Davis' *The Experience of War: The United States in World War II* is a solid and comprehensive summary. In *Day of Trinity,* Lansing Lamont presents a documentary of the events of the day on which scientists exploded the first atomic device. Gar Alperovitz, in *Atomic Diplomacy,* is concerned with the decision to use the bomb against Japan, contending that the decision was made in order to gain an advantage over the Soviet Union in the postwar struggle for power. A different conclusion is reached in *The Decision to Drop the Bomb,* by Len Giovanitti and Fred Freed, who conclude that Japanese intransigence made the use of the bomb necessary and inevitable.

Dwight D. Eisenhower's account of his years in the White House, *Waging Peace,* as a disappointment to historians, who found in it little that was not already on the public record. The book is regrettably impersonal, and little of the warm but explosive Eisenhower personality is evident.

In the history of more recent events, Theodore H. White's popular study *The Making of the President, 1964* repeated his earlier performance in *The Making of the President, 1960.* The more recent of the two begins with the assassination of President Kennedy in November 1963 and follows the developing political conflict through the nomination of Barry Goldwater to his crushing defeat in the 1964 election.

Other Works. The problem of racial relations in the United States is at the heart of several books of reminiscences. Claude Brown's *Manchild in the Promised Land* is a hard and unsentimental picture of the difficulties of growing up in Harlem, and of the Negro's problem of establishing an identity in American society. Erskine Caldwell's *In Search of Bisco* is the story of a journey taken by the noted novelist through the South in search of a Negro he had known in his youth; it is a sad and depressing book. Another Southerner's unhappy view of his heritage is found in Robert Canzoneri's *I Do So Politely.*

Edwin Way Teale was one of the first of the recent naturalists to write about the natural world in a distinctive literary style. In 1965 Teale published *Wandering Through Winter,* an informative and graceful account of a winter journey across the United States. It is the final volume in a series dealing with the four seasons.

Two creative artists produced unusual books. The poetess Muriel Rukeyser wrote *The Orgy,* a vigorous and stimulating account of a festival in a small Irish town. Nelson Algren, the novelist, in *Notes from a Sea Diary: Hemingway All the Way,* combined a description of a Pacific Ocean voyage on tramp steamers with a vigorous defense of Ernest Hemingway's life and writings. The critic Edmund Wilson wrote *O Canada: An American's Notes on Canadian Culture.* Although the book was criticized because of the author's evident sympathy for the separatist French minority, it is lively and informative. (See also BOOK PUBLISHING; CHILDREN'S LITERATURE; THEATER.)

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AMERICAN SAMOA. See PACIFIC ISLANDS.

ANDREWS, Julie. See biography under MOTION PICTURES.

ANGOLA. See PORTUGAL.

NATIONAL SCIENCE FOUNDATION

ANTARCTIC SATELLITE-TRACKING PROJECT employs a large antenna to pick up data transmitted by a geophysical satellite as it passes over the South Pole.

ANTARCTICA

In 1965 the U.S. Naval Support Force began its second decade of continuous operation in Antarctica. It included nine ships and 2,500 men, and logged more than 9,000 flight hours. Its work was carried out in conjunction with some 50 scientific projects, financed and coordinated by the National Science Foundation. These projects, conducted during the Antarctic summer (October 1964–March 1965), were based at five U.S. stations manned by 150 scientists, 35 of whom remained in Antarctica through the winter. Rear Admiral Fred E. Bakutis replaced Rear Admiral James Reedy as commander of the support force on April 27, 1965.

A number of interesting observations were made, including the discovery of a pink mite within 309 miles of the South Pole. Adélie penguins were taken from their rookeries and flown inland and released. Signals from small radios placed under their flippers enabled planes to follow their course as they found their way home, guided by the sun.

U.S. Scientific Undertakings. The most ambitious summer program was the Queen Maud Land Traverse Party, which departed from the South Pole on Dec. 4, 1964, on the first leg of a journey into the last major unknown region of Antarctica. Ten scientists (8 Americans, 1 Belgian, and 1 Norwegian), collected geophysical and glaciological data along their 800-mile trek to the "pole of relative inaccessibility" (the point farthest inland). They cached their equipment for next year's successors and flew back to McMurdo Station on Feb. 2, 1965. Five seasons will be required to complete the 5,000-mile zigzag route to Belgium's Roi Baudouin Station on the coast at Bried Bay.

The most novel project was the audiovisual studies of the conversations of seals and of the built-in sonar device that permits them to dive for food to depths of 1,500 feet or more. The project was conducted in a six-by-four-foot steel underwater chamber equipped with hydrophones and floodlights.

As part of a larger study of radio propagation paths around the globe, a 21-mile-long antenna was laid from Byrd Station across the two-mile-deep icecap. Experiments are made with controlled, manmade, very-low-frequency radio signals transmitted along the earth's magnetic lines of force.

Information received from a special satellite-tracking unit at McMurdo Station and from a smaller unit at Byrd Station may aid in determining the exact shape of the earth. Space exploration will also benefit from drilling into the icecap at Byrd Station to a depth of 8,000 feet to trail illusive cosmic dust.

U.S. Stations. Palmer Station, on Anvers Island, was dedicated on Feb. 25, 1965. The base is occupied by five scientists and four Navy men. Under the terms of the Antarctic Treaty, ships from Argentina, Chile, and Great Britain, the three nations claiming this area, visited the station during its construction.

A new road built of crushed rock facilitated the transportation of supplies from the ice edge to McMurdo Station. The station's fresh-water capacity was nearly tripled when a desalinization plant began in February to convert seawater into drinking water. On March 31, McMurdo's nuclear reactor went into operation to provide electric power.

Hallett Station, the joint U.S.-New Zealand base, was closed in February, and it will operate only in the summer, with automatic instruments providing navigational and meteorological information.

Activities of Other Nations. The Soviet Union began moving its 8-year-old Mirnyy Station 1,300 miles west, to Molodezhnaya, where logistics are better for resupply. Mirnyy will continue as a research station. George H. Meyer, a microbiologist from the University of Texas, was the American exchange scientist at Mirnyy in 1965, while a Russian physicist, Igor A. Zotikov, conducted heat-flow investigations of sea ice at McMurdo.

Japan, which suspended operations in 1962, commissioned a new 7,000-ton icebreaker, the *Fuji*, which will transport an 18-man party to reoccupy Soya Base in the 1965–66 season. The French Dumont d'Urville Station on Adélie Coast was resupplied by the motor ship *Thala Dan*.

Ten Belgian and six Dutch scientists wintered at Roi Baudouin Station. Thirty men also wintered at the British Halley Bay Station in the Weddell Sea, and 77 more were at the six other British stations on or near the Antarctic Peninsula, where Chile and Argentina also maintain permanent bases.

EDITH M. RONNE
Antarctic Specialist

ANTHROPOLOGY

Although anthropologists continued their traditional studies, there was a noticeable trend in 1965 toward a more intensive study of modern complex societies, and there was a greater emphasis on interdisciplinary approaches to understanding man and his works.

RAPHO—GUILLUMETTE

ANTHROPOLOGY museum in Mexico City has Aztec stone, dated 1469, depicting war victories.

Interdisciplinary Trends. Anthropologists are giving increasing attention to many subjects that require greater interdisciplinary cooperation. A number of recent conferences and seminars have dealt with interrelationships between sociology and linguistics, which is a subfield of anthropology. An important seminar on sociolinguistics was held at Indiana University in the summer of 1965. Topics that were covered included linguistics and social theory, multilingualism, and language standardization.

Another current focus of interdisciplinary efforts is the relationship between genetics and human behavior. A committee of leading geneticists and anthropologists, appointed by the Social Science Research Council, is directing studies so that social scientists may learn modern genetics and biologists may learn social science. Under its auspices, scholars have concentrated on various aspects of the behavioral consequences of genetic differences in man. Subjects that were dealt with included polymorphism and natural selection, hereditary factors in the psychological variation in man, psychological variation in man, psychopathology, and individual differences in response to stress.

At the 24th annual meeting of the Society for Applied Anthropology, an interdisciplinary approach was focused on problems of the Appalachia region, one of the primary targets in the national war on poverty. Representatives of the Appalachian Regional Commission spoke on the general issues. Specialists presented research papers on natural resources, human geography, upgrading of human resources, locations for schools, architectural problems, demographic indicators of social change, urban migration, experiments to reduce birth rates, and approaches to community medicine. The multidisciplinary review provided a comprehensive picture of the regional problems, and it supplied the wide-ranging information necessary for formulating coordinated remedial programs. This discussion of the problems of Appalachia epitomizes the shift in cultural anthropology from studies of tribal and traditional peoples to studies of modern complex societies and their problems. (See also ANTI-POVERTY PROGRAM.)

At the 64th annual meeting of the American Anthropological Association in Denver, Colo., concern was expressed about events connected with Operation Camelot, a Department of Defense research project that utilized anthropologists and other social scientists to study the backgrounds of insurgency and counterinsurgency in selected countries. The project was cancelled after Chilean social scientists protested an attempt to involve them in a study of sociopolitical factors underlying possible internal warfare in Chile. As one result of this episode, a presidential directive ordered a formal review of all government-supported overseas research to ascertain that proposed research projects will have no adverse influence on foreign policy. This series of events has crystallized several crucial professional questions for anthropologists. The first concerns the growing problem of access to foreign areas for purposes of scientific study. Because of political and social ideologies and the image of the United States abroad, it is becoming more difficult for government and privately sponsored research to be conducted in some areas of the world. Secondly, this abortive project has raised the question of the position and integrity of the American researcher in foreign countries.

Origin of Man. Dr. Louis S.B. Leakey, a noted anthropologist, asserted that three types of manlike remains were found in the Olduvai Gorge in Tanzania, East Africa, and that these types had coexisted and hence represented parallel paths toward the evolution of modern man. His views on the multiplicity of coexistent forerunners of man were challenged, but his datings from field work are generally accepted. These show that some forerunners of man lived almost 2 million years ago. Leakey spoke in Chicago in April 1965. (See also ARCHAEOLOGY.)

Enzymes and Evolution. At a meeting of the American Association of Physical Anthropologists in May 1965, Dr. Frank N. Syner and Dr. Morris Goodman reported study results based on examinations of the brains of 22 primates. They found that in the brains of primates the proportion of one type of lactic dehydrogenase (an enzyme that acts on the lactic acid in the body) increased as the level of development rose from the lowest primates to man. They also found that the proportion of a second type of lactic dehydrogenase in the brains of primates decreased as the level of development increased. There is evidence, consequently, that chemical analysis of the primate brain can be utilized as a measure of evolutionary development.

Research in a Complex Society. The role of the anthropologist in the developing areas of the world is substantially different from his role in studying simpler tribal peoples. In national societies, the demands on the researcher are greater because the peoples' sensitivities to being studied make him more vulnerable to criticism.

A furor was set off in Mexico by Oscar Lewis' *The Children of Sanchez,* a book about a Mexican slum family. The book was attacked by a small group of Mexican professionals who claimed that it was subversive and defamatory to the Mexican way of life. The ensuing argument was a major controversy in Mexico during the year, and it indicates the increasing difficulty of performing anthropological research and publishing the results in countries that, in the process of rapid sociocultural change, have developed a heightened sensibility on questions concerning the national image.

Museum. The National Museum of Anthropology in Mexico City, Mexico, which went into full operation in 1965, is one of the finest anthropological museums in the world. In three miles of exhibition space, ingeniously arranged into 25 principal salons, the museum presents the past and contemporary life of the indigenous peoples of Mexico in a series of exhibits that blend aesthetic consideration and scientific exactitude. The archaeological collections range from displays dealing with early human origins to those showing the higher levels of indigenous Mexican civilizations, such as the Teotihuacan, Toltec, Aztec, Oaxacan, Veracruzan, and Mayan. Conceptually and spatially integrated with these displays is a series of comprehensive ethnographic exhibits that depict present-day Mexico.

American Males. A national survey shows that American males between the ages of 18 and 79 average 5 feet 8.2 inches in height, and that those between the ages of 18 and 24 average 5 feet 9 inches in height. Elaborating on these statistics, Dr. Albert Damon, an anthropologist at Harvard University, said that some evidence indicates there is a limit to the inherited American capacity to increase in height, and that American males probably will reach a maximum average height of about 5 feet 10 inches in the not-too-distant future.

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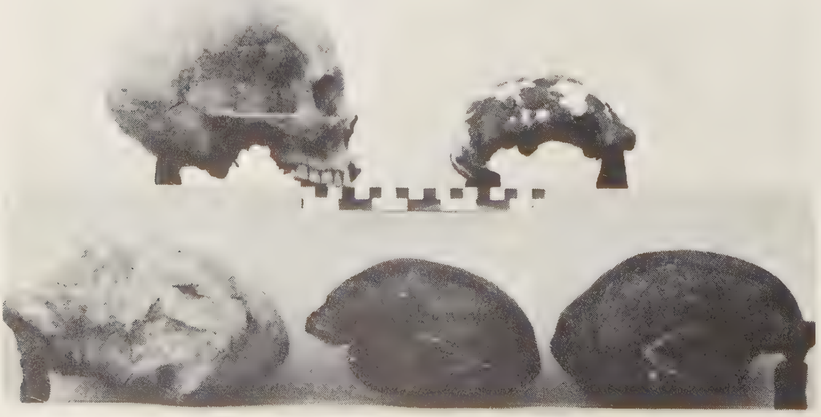
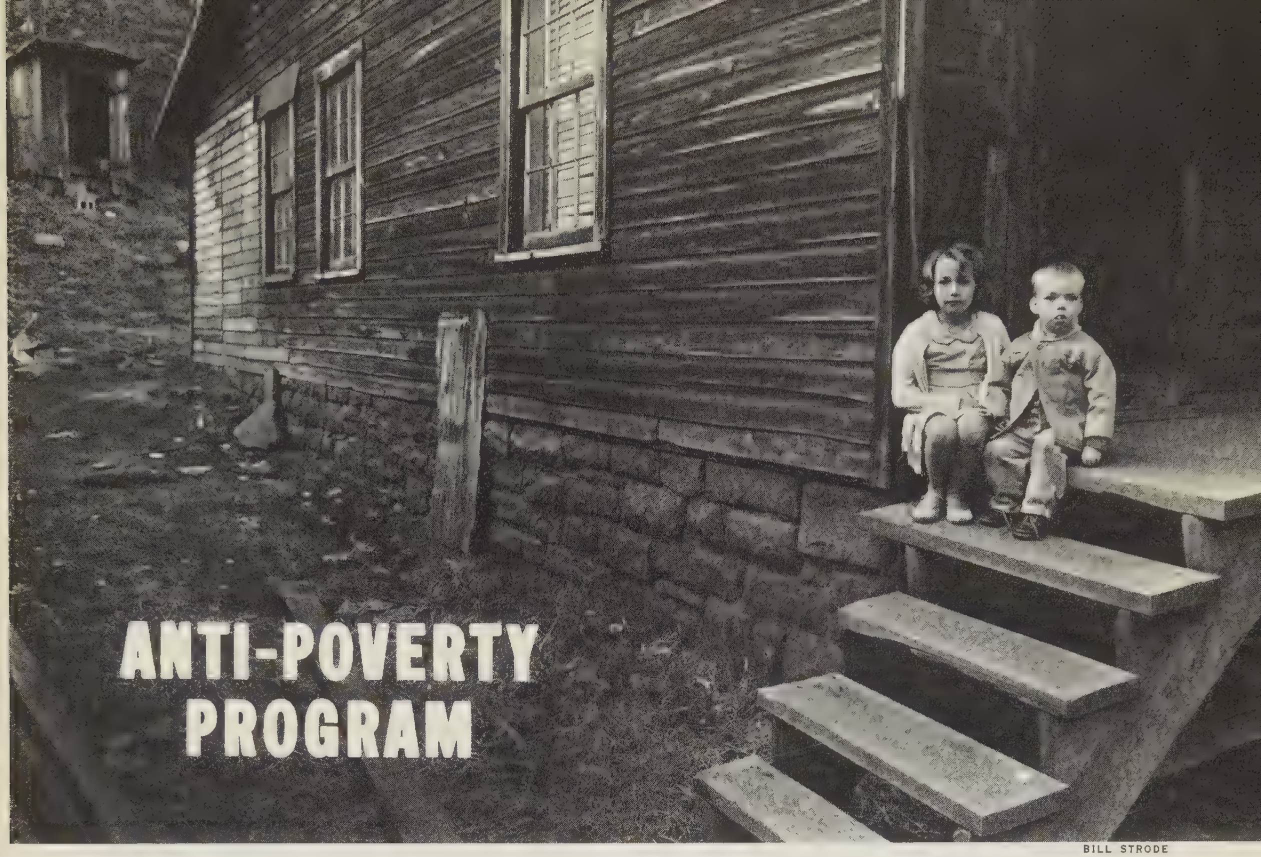
UPI



HOMINID SKULLS (upper right and lower left), found by anthropologist Lewis S.B. Leakey at Olduvai Gorge in Tanzania, have smaller brain space than skull of a modern man (upper left). The massive brow ridges and the protruding back sides of the two ancient skulls resemble skull features of Java man (lower center) and Peking man (lower right), who flourished about 400,000 to 600,000 years ago.

ANTI-POVERTY PROGRAM



BILL STRODE

POVERTY IN THE UNITED STATES, a disconcerting presence in an ever more affluent society, continued to be the target of a major federal-state program in 1965.

ANTI-POVERTY PROGRAM

A national campaign to eliminate poverty from the United States entered its second year in 1965, with thousands of volunteers and government officials active on several fronts. The Office of Economic Opportunity, headed by Sargent Shriver, supervised programs designed to help unemployed youths, elderly persons, preschool children, migrant workers, small businessmen, and others. A separate program sought to bring economic opportunities to the Appalachian Mountains region. The anti-poverty program is discussed in this article under the following headings: (1) The War on Poverty; (2) Appalachia; (3) The Job Corps; and (4) The Youth Corps.

THE WAR ON POVERTY

There is no single cause of poverty, and there is no single solution. Poverty reflects inadequate education, unemployment, poor health, deficient housing, and lack of opportunity. In the past, public and private efforts have been directed toward alleviating the effects of poverty. But in 1964 the United States government began a massive attack on the root causes of poverty. This war on poverty continued in 1965 to inspire its participants with both hope and a sense of achievement. Although the struggle will be neither brief nor easy, the anti-poverty program during 1965 gave promise that the war eventually will be won.

Economic Opportunity Act. In his State of the Union address on Jan. 8, 1964, President Johnson announced his intention to launch an all-out war on the poverty that affects 34 million Americans. On March 16 of that year he outlined his battle plans in a draft of the proposed Economic Opportunity Act that would provide the means of attacking the causes as well as the effects of poverty.

On Aug. 20, 1964, Congress passed the Economic Opportunity Act. The act established an Office of Economic Opportunity, headed by a director appointed by the president, to coordinate the anti-poverty efforts of all segments of the federal government. Congress appropriated approximately $800 million for the first year's operations, and $1.5 billion for the second year of the program.

Recognizing that the poor can be found in every age group, in every circumstance, and in every section of the country, the act authorized 10 major projects: the Job Corps, Neighborhood Youth Corps, College Work-Study Program, Community Action Program (including Project Head Start and the Foster Grandparents and Upward Bound programs), Migrant Agricultural Employees Program, Volunteers in Service to America, Adult Basic Education Program, Work Experience Program, Small Business Economic Opportunity Loan Program, and Rural Loan Program.

Help for Young People. The first three years of these programs are designed to help youth. The president's study group on manpower conservation reported in 1964 that one third of all young men aged 18 would be found unqualified if they were examined for induction into the armed forces. The report added that "the majority appear to be victims of inadequate education and insufficient health services." A nationwide survey of persons who had recently failed induction mental tests (one half of the rejectees) clearly demonstrated that a major proportion of these young men were the products of poverty. The report concludes: "They have inherited their situation from their parents, and unless the cycle is broken, they will almost surely transmit it to their children."

To break this cycle, the *Job Corps* provides for residential training and education centers, and the *Neighborhood Youth Corps* makes available job training and experience in home communities. The target population of both these programs is the 3 million youths, aged 16 to 21, who live in poverty. (See below, *The Job Corps* and *The Youth Corps.*)

The *College Work-Study Program* gives students an opportunity to work on or off campus. The student works 15 hours a week while attending classes, but he may work up to 40 hours a week during summer vacations or when not enrolled in a regular semester. In the fall of 1965, through funds from the original appropriation of $56 million, more than 105,000 students in 1,100 institutions participated in this program. By the summer of 1966, that number will have grown to an estimated total of 135,000 students, at a cost of $60 million. After the passage of the Higher Education Act of 1965, the College Work-Study Program was transferred to the Office of Education in the Department of Health, Education, and Welfare. It was expected that the program will help 50,000 students graduate from college each year who otherwise would not have done so.

Community Action Program. Often called the heart of the anti-poverty effort, CAP brings together community efforts and resources to combat local poverty situations in the most effective way possible. Because the requirements for fighting poverty vary from community to community, the program may range through such diverse projects as remedial education; employment information, counseling, and placement programs for unemployed youth; job training and education for unemployed adults; extension of outpatient health clinic services; legal services for the poor, including the establishment of neighborhood law firms; and special programs to improve living conditions of the elderly. The community is asked to develop programs broad enough to give promise of eliminating the causes of poverty, to enlist the aid of the poor themselves in planning and operating the programs, and to administer and coordinate the programs through public or private nonprofit agencies.

Allocations for CAP amounted to $240.1 million in the 1965 fiscal year, during which 415 communities, including Indian reservations and migrant worker areas, inaugurated CAP programs. The allocation for the 1965 fiscal year totaled $650 million. CAP hopes that individuals, groups, and communities will develop the ability to solve their problems themselves.

Project Head Start began as a Community Action Program to provide preschool learning experiences, medical and dental examinations, and social services to children from low-income families who would be entering school for the first time in the fall of 1965. Without Project Head Start, these children would have been at a disadvantage when taking their place in the classroom beside more fortunate children. By the beginning of July, the program, surpassing the original expectation of assisting 100,000 children, enrolled more than 560,000 children in 13,400 classrooms in 2,400 communities. Parents participated in every phase of the program, and the poor were employed as assistants. Head Start cost $85 million, and utilized the services of about 500,000 volunteers.

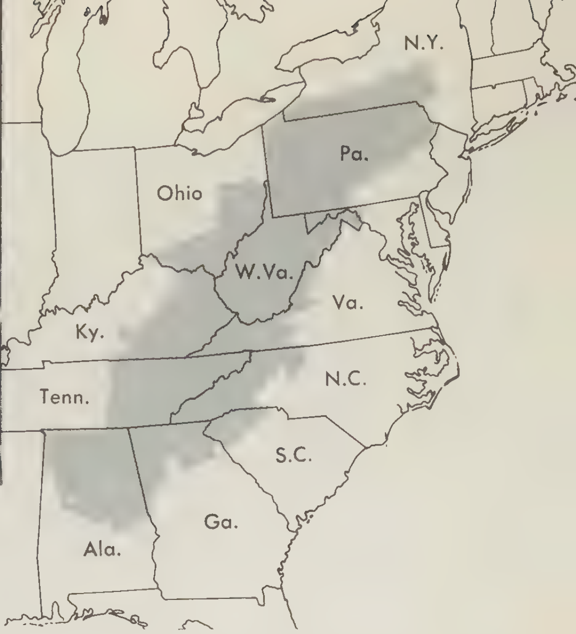
For the 1966 fiscal year, Project Head Start was extended to embrace a year-round program for children three to five years old, a summer program for those not enrolled on a year-round basis, and a follow-up program for summer Head Starters, including home visits, special tutoring, field trips, and medical care.

Poor persons over 65 years of age, totaling about 5.4 million, represent 16% of the poverty population. Under the CAP program known as *Foster Grandparents*, older Americans will be trained to care for institutionalized children and then work in paid positions as substitute parents for those children.

The CAP demonstration project, *Upward Bound*, which operated in 18 institutions of higher education in the summer of 1965, enabled 2,061 high school students from low-income families to participate in special academic and cultural programs as part of their preparation for college. In 1966, with

OFFICE OF ECONOMIC OPPORTUNITY

PROJECT HEAD START gives preschool children from low-income families a chance to acquire learning experiences. The participation by adult volunteers helped make the program succeed in 1965.



WIDE WORLD, OFFICE OF ECONOMIC OPPORTUNITY

SARGENT SHRIVER, director of the anti-poverty program, testifies before a House committee on April 12 in behalf of a continuation of the program. Map *(right)* shows Appalachian region (shaded area) being helped by the program.

an allocation of $25 million, Upward Bound programs will provide 25,000 students a chance to develop their potential talents, to seek admission to college, and, hopefully, to break out of the confines of poverty.

The *Migrant Agricultural Employees Program,* administered by the Community Action Program, provides for the housing, sanitation, education, and day-care needs of migrant workers and their families. Federal grants and loans help states and localities render these services. Fifty-three grants, totaling $15 million and benefiting more than 100,000 migrants, were approved in the 1965 fiscal year. Sixty-five grants, totaling some $20 million, were available to assist 120,000 migrants in the fiscal year 1966. The development of these programs over the next 10 years is expected to end the impoverished circumstances of the nation's two million migrants.

Volunteers in Service to America. This organization, known as VISTA, is a domestic peace corps that permits persons aged 18 and older to participate in the war on poverty. Volunteers receive six weeks of training, work for at least a year, and receive a monthly living allowance. At the completion of their service, they are paid $50 for each month of service. VISTA serves wherever poverty exists: in cities, country towns, and migrant camps, on farms and Indian reservations, and among the sick and disabled, the mentally handicapped, the very young, and the very old. Any state or local organization that is trying to help the poor may request the services of VISTA volunteers. During the 1965 fiscal year, requests for more than 6,500 volunteers were received from 508 sponsors. By the end of the 1966 fiscal year, the VISTA program will comprise 4,000 volunteers in 400 projects.

Other Programs. The remaining programs of the Office of Economic Opportunity are administered by other agencies of the government. In 1965, funds for the *Adult Basic Education Program* gave 37,991 persons, aged 18 years and over, the opportunity to learn the fundamental skills of reading, writing, speaking, and arithmetic. Administered by the commissioner of education, the program has available $45 million for 1966, during which it will train teachers, develop instructional materials, and promote maximum competency in basic skills for 105,000 of the approximately 11,500,000 adults with less than a 6th grade education.

The *Work-Experience Program,* administered through the Welfare Administration, is designed to aid unemployed heads of families and other needy adults who lack the basic education and work skills necessary for employment. Participants and their families receive counsel and support, such as homemaker services and medical care, during the period of training and work experience. Some $112,000,000 was appropriated for 1965, benefiting 88,700 persons having an estimated total of 273,000 dependents. It was anticipated that during 1966, some 109,300 persons would participate directly in work-experience programs, at a federal cost of $150 million. As in the case of the Adult Basic Education Program, a great expansion will be required to reach the target population of 2 million adults in need of such services.

The Small Business Administration (SBA), using funds provided under the Small Business Act, administers the *Small Business Economic Opportunity Loan Program.* This program provides management counseling and loans of up to $25,000 to the very small businesses that cannot meet regular SBA credit requirements. In 1965, 159 loans, totaling $1,766,350, were granted. To ensure that borrowers receive the counseling and assistance they need, loans are available only in areas served by a Small Business Development Center (SBDC). These centers assist with applications, continually survey the business needs of the community, and help create jobs. Future plans include expanding the SBDC program to 39 centers and granting 2,500 loans at a cost of $25,000,000.

The *Rural Loan Program,* administered by the Farmers Home Administration in the Department of Agriculture, lends money to low-income farm and nonfarm rural families to buy small parcels of land or finance small rural businesses. Loans may not exceed $2,500, and to qualify, a recipient must live in the country or in a small town of not more than 2,500 people. Cooperatives serving low-income rural families are also eligible for loans.

In 1965, opportunity loans totaling $19 million were made to more than 11,000 persons; 82 cooperatives received $929,200. It was estimated that in 1966 a total of $33 million would be lent to

15,700 individuals and 350 cooperatives assisting 8,750 families.

Sargent Shriver
Director, Anti-Poverty Program

APPALACHIA

The year 1965 had an "Appalachian spring." In March, Congress passed, and President Johnson signed into law, the Appalachian Regional Development Act. "I sign this bill," said the president, "in the belief that we can and we shall add strength to all America by renewing the strength of this old and this honored region of Appalachia." Although the region has a great heritage, what it needs most is a future. In a sense, 1965 was the first year of that future.

The strength of which President Johnson spoke was to be generated by $1.1 billion in federal funds, plus millions more from the Appalachian states themselves. The purpose of these funds was to provide those facilities that would raise the lagging economy of the region so that the monthly statistics of America's prosperity would no longer be followed by the words "except in Appalachia."

The Appalachian Regional Development Act. The funds provided by the act included: $840 million for highways, $41 million for multicounty health centers, $17 million for land stabilization and erosion control, $5 million for timber development, $36.5 million for mining area restoration, $5 million for a water resource study, $16 million for vocational education facilities, $6 million for sewage treatment plants, $90 million for supplements to federal grant in-aid programs, and $5.5 million for planning and research.

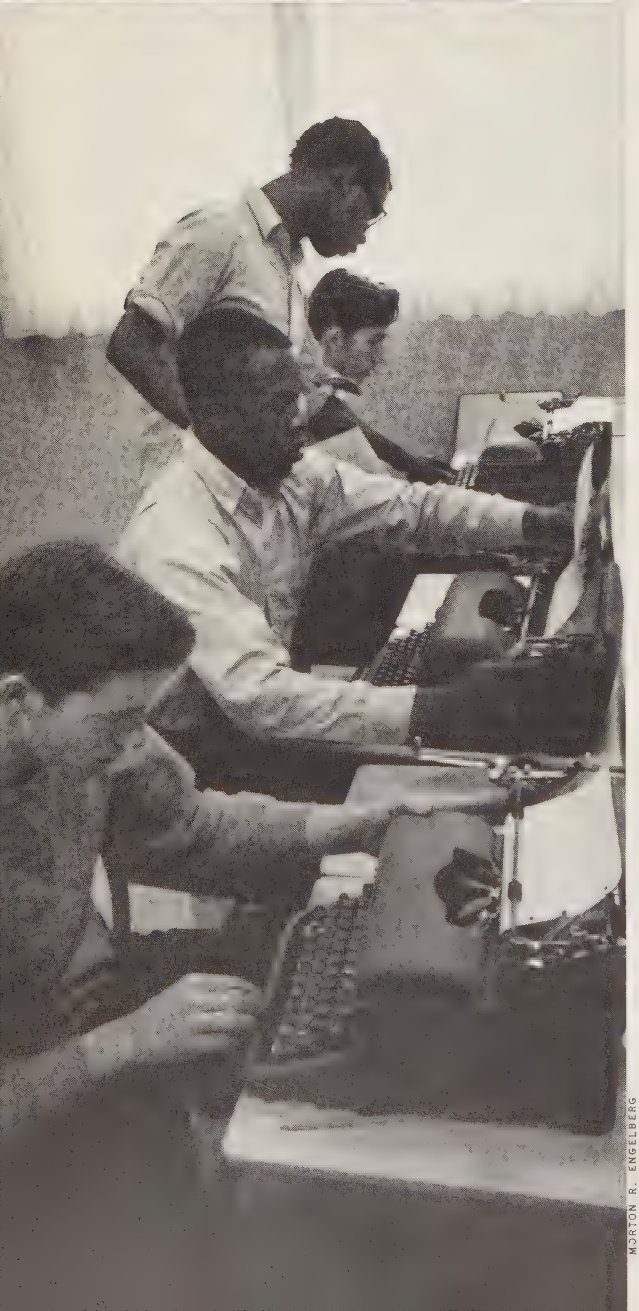
The most important tool provided for in the program was the one that cost the least money—the Appalachian Regional Commission, a joint federal-state agency headed by a federal member appointed by the president and by a state member elected from among the Appalachian governors. With a staff of only 65 people, this commission was charged with the task of doing in Appalachia what a national consensus had said must be done.

The work got off to a fast start. After the authorizing legislation was passed on March 3 and signed by the president on March 9, the commission met for the first time on April 19. On April 30, Congress passed the appropriations for the first fiscal year. Nine weeks later bulldozers broke ground to begin the 2,350 miles of new highways in the region.

This record for speedy action was not the only impressive thing about the Appalachian effort. For the first time, more than $1 billion in federal funds was being committed to a program in which projects would be initiated by the states. The states would design the projects to fit their needs, and, once the projects were approved by the regional commission, they would execute them. Also for the first time, a regional effort was under way that fully emphasized regional planning, with the states of the region having full control over the projects within their borders.

In addition, this is the first government program that offers substantial aid, not on the basis of where it is needed, but on the basis of where it

PAUL E. GLINES



MORTON R. ENGELBERG

JOB CORPS provides instruction in various skills, with the expectation that training will help young people escape the grip of poverty. Expert chefs and cooks share their knowledge *(above)*, while students learn typing *(left)*.

will do the most good. Congress recognized that there are other federal and state programs to meet the more-pressing needs of the people of Appalachia. The new program was designed to solve the problems that create these needs, by raising the economy of a whole region.

Character of the Region. Why Appalachia? Why should a program for parts of just 12 states garner the votes of at least one senator or representative from no less than 48 different states? Because, as President Johnson said, renewing the strength of Appalachia would indeed add strength to all America. For example, if the people of Appalachia had the same buying power as the average American, more than $12 billion would be added to the gross national product each year.

The theory behind the program is that the people of Appalachia should gain that buying power through economic development, rather than through welfare support. (Among the program's goals are the planned obsolescence of both "pork barrel" legislation and the dole.) To achieve a higher income level, the area needs jobs, and, to get them, its people must have vocational training in the needed skills. Industry must come in to provide these jobs, and highways and community facilities must be built to attract industry.

The development of Appalachia, begun in 1965, will last officially only six years—the legislated lifetime of the Appalachian Regional Commission. The program is just a beginning, however, because it is designed to enable the people of Appalachia to do the rest of the job themselves.

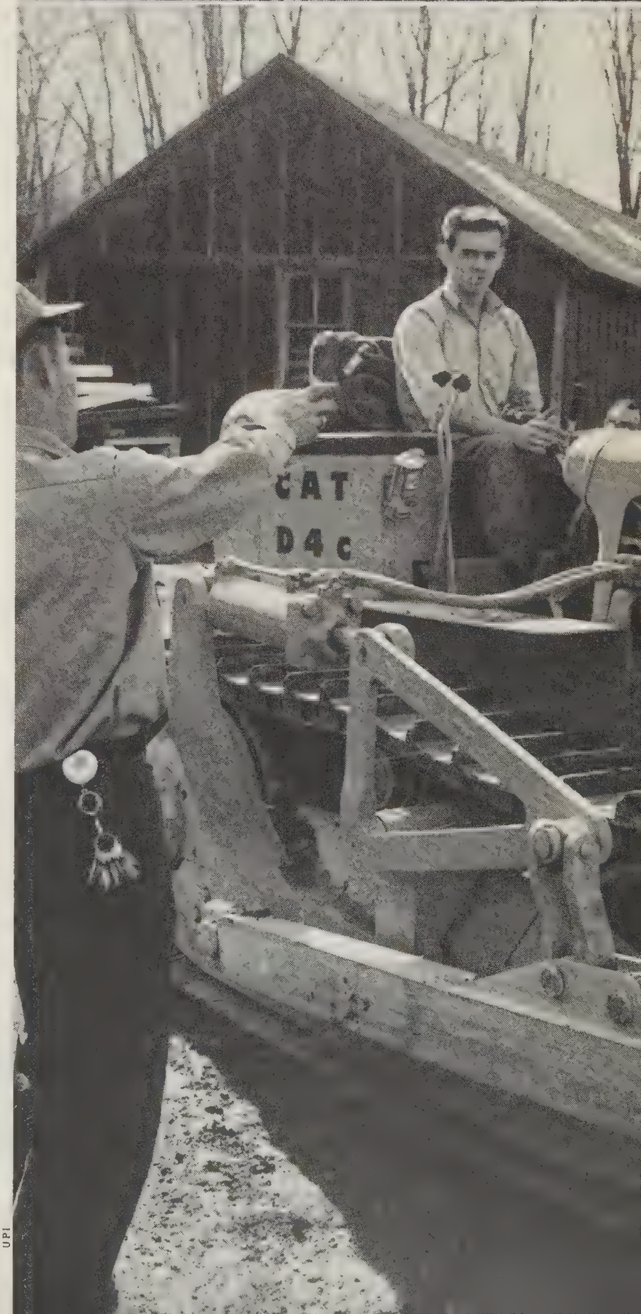
And what must be done? To answer this question, it is necessary to know about the area itself. Appalachia takes its name from the Appalachian Mountains that cut through the region. It extends from Lake Erie to northern Alabama, and, with 17 million people and 182,000 square miles, it has roughly the same size and population as California.

Appalachia is a densely populated mountainous region, where the majority of the people, by almost every index of modern life, exist at a significantly lower level than the average American. Per capita income is almost 40% below the national average, and unemployment is 50% greater.

The region has many advantages, however. Its great natural beauty gives it a potential for a growing tourist industry. It has a heavy annual rainfall, although there are no natural impoundments to store the water and prevent erosion. It also has large coal and timber resources. More than 60% of the people of the United States live in areas within 300 miles of Appalachia. These areas, which include the cities of Boston, New York, Philadelphia, Baltimore, and Washington on the east, and Detroit, Chicago, and St. Louis on the west, hold the key to Appalachia's future, for they represent both the market and the production centers that mean so much to the economy of the region.

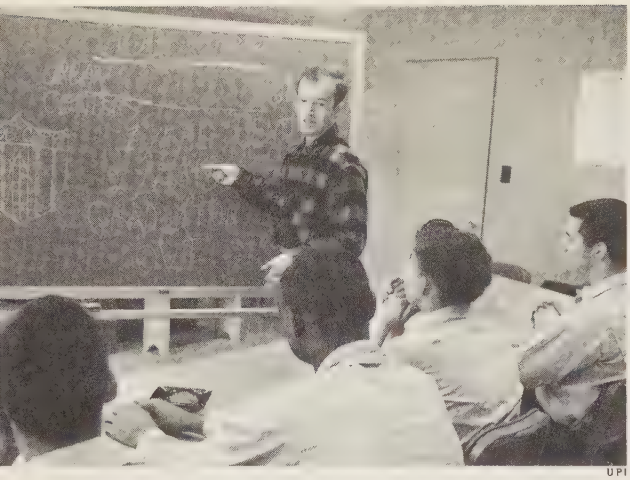
The program begun in 1965 seeks to utilize Appalachia's advantages and overcome its disadvantages. The region's greatest need is an adequate highway network to stimulate commerce, tourism, and industry, and to enable workers to commute to distant jobs. Therefore, the bulk of the program is concerned with highways. The region's isolation had

JOB CORPS



UPI

AT CONSERVATION CENTERS, Job Corps trainees serve while learning. Boys *(above)* plant Ponderosa Pine seedlings at the center nursery located at Tillamook, Oreg. Youth *(right)* receives instruction in driving a bulldozer.



UPI

INSTRUCTOR explains that Job Corpsmen will graduate from the center when they are ready for outside employment.

persisted mostly because of the high cost of highway construction; for example, it costs almost three times as much to build a mile of highway in West Virginia as it does in Iowa. Until 1965, the cost of construction had not been a factor in allocating federal highway funds.

The Program Is Begun. By late summer, the Appalachia Regional Commission had approved all of the recommended highway corridors, and funds for construction within the corridors were made available. New York State, which has 13 Appalachian counties, joined the commission in August. By the end of 1965, approval had been given to more than 30 local access roads, 18 mining restoration projects, most of the state land treatment plans, 10 local development district programs, and a number of grant-in-aid projects, including vocational education schools, college buildings, airports, libraries, and sewage treatment plants. For 1966, plans and blueprints were to be completed on many more projects in all 12 Appalachian states in time for the spring construction season.

What happens when the governors of Appalachia, or their representatives, meet with the federal cochairman at least once each month? There has been freewheeling debate and discussion, but time and time again, individual state interests have been discarded in the interest of regional accord. The North and the South, liberals and conservatives, Republicans and Democrats are represented on the commission, but no major disagreement has been encountered because of these differences.

The Future. Eventually, the entire United States, as well as the people of Appalachia, will benefit from this program. The American system of government will also benefit, because the program demonstrates that the use of the full combined resources of state and local governments, together with those of the federal government, can accomplish what one state could not do alone.

The chief goal of the Appalachia program is to ensure that the incredible growth that has characterized America in recent decades will no longer bypass one tenth of its people. What had begun in the mind of John F. Kennedy when he campaigned in the West Virginia presidential primary in 1960 became a reality under President Lyndon Johnson—"creative federalism," the president called it. Already plans were being made for regional development programs in other areas, with the Appalachia program and its regional commission serving as the model.

John L. Sweeney
Federal Cochairman
Appalachian Regional Commission

THE JOB CORPS

Congress, concerned with the persistence of disabling poverty in the United States during a period of unparalleled general prosperity, authorized the Job Corps as part of the national war on poverty. Of special concern was the plight of hundreds of thousands of poor young men and women who are out of school and out of work, and who lack the opportunities to acquire the experience and skills that might equip them to break out of the tightening clutches of poverty. Congress appropriated $183,000,000 to enable the Job Corps to establish in its first year nationwide residential centers where thousands of men and women aged 16 to 21 can learn to be productive and constructive citizens.

Launching the Job Corps. On Jan. 15, 1965—a cold and gray day—30 young men from the streets of Baltimore and from the mountains of western Virginia and Kentucky arrived at the first Job Corps center, Camp Catoctin, situated in a national park in the Appalachian foothills of western Maryland. This small band of pioneering Job Corpsmen had taken the challenging first step out of poverty. By mid-1965, some 10,000 men and women had followed these first recruits into 48 centers in 27 states (see the accompanying table). Thus, a widely dispersed, residential, educational, and job-training system—a system without parallel in American education—was established.

The Job Corps' opportunity and challenge captured the imagination of America's youth. By midyear, more than 230,000 young men and women had written to the Job Corps to express their interest in the program, and some 30,000 had filed applications. (In the case of men, these applications were processed principally by local offices of state employment bureaus; in the case of women, by local chapters of Women in Community Service (WICS), an organization created to screen women applicants.) Because of the clear need and interest of youth, plans were made to increase the Job Corps' capacity to 50,000 trainees.

The first 10,000 members of the Job Corps provided a clear picture of the sinister effects of poverty. Nearly two thirds had lived in substandard and overcrowded houses. Almost 40% came from families receiving public assistance. In more than 60% of the families, the primary wage earner was unemployed. In half the homes, the parents had less than an 8th grade education.

It was not surprising, therefore, that only half of the first corpsmen had completed the 8th or 9th grade of school, and that more than half had a reading level below the 6th grade. Considering such limitations, it is understandable that more than 90% had never held a job.

To equip these young men and women with skills, the Job Corps created a unique residential program that marshaled the resources of the various organizations, including the business community, universities, and agencies concerned with conserving and developing natural resources. It offered individual tutoring and counseling, both formal and informal, by trained staff members available to supervise

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ST. LOUIS POST DISPATCH—BLACK STAR

NEIGHBORHOOD YOUTH CORPS gives enrollees chance to receive training and to serve their own communities. At Kinloch, Mo., young men clean roadsides.

and help enrollees 24 hours a day and on weekends. Special instructional materials for individual progress and self-teaching were adopted. To keep vocational courses up to date, private industry donated modern equipment.

Three Kinds of Facilities. The Job Corps established three kinds of facilities to serve the differing needs of its members. Some young men were sent to conservation centers managed by the U.S. Forest Service, the National Park Service, and other conservation agencies. The program in these centers, which accommodate 100 to 200 men, aims at raising basic educational skills and accomplishing much-needed conservation work. Young men who could profit at the outset from more advanced training in job skills were sent to training centers near urban areas. In these centers, with 1,000 to 3,000 men, the trainees prepare immediately for specific vocations. Young women went to centers for 250 to 450 girls, where the program emphasizes preparation for jobs and family management.

The corpsmen at the conservation centers typically spend half of their working day on projects to conserve the area's resources or to expand nearby recreation facilities. By July 1965 the men of the Job Corps had spent more than 12,000 hours fighting fires or working on fire-prevention projects. They helped control disease and insect pests on some 2,000 acres of national land, and spent 1,300 hours in forest nurseries planting and raising seedlings for reforestation. They also helped build 250 family-camping units and 30 shelters, lay more than 1,200 yards of pipe and 11,000 yards of walks, and develop 40 miles of recreational fishing streams.

These and other projects are accomplished during the time set aside each day to enable corpsmen to experience the demands, discipline, and skills of man-size work. The other half of the day is spent in the classroom on the crucial tasks of learning to read and calculate well enough to understand a repair manual, fill out a job application, or pass the Selective Service examination.

The programs at men's and women's training cen-

HARYOU-ACT (Harlem Youth Opportunities Unlimited—Associated Community Teams) is a joint New York City-federal project to improve social environment.

HENRY MONROE—PIX

ters, operated by universities, business corporations, and nonprofit organizations under contract to the Job Corps, differ from those at the conservation centers, particularly in the type and intensity of the vocational training program. The men spend full time at learning a trade and receiving a basic education. After being introduced to a variety of possible vocations, they choose a course of training suitable to their interests and aptitudes. Those who choose auto mechanics first learn to perform simple service jobs and then progress to repairing complex parts. Progress from the simple to the complex is also true of training in radio and television repair, office work, selling, the culinary arts, metal working, or data processing.

Women receive vocational training in clerical skills, retailing, food preparation, child care, health care, recreation, education, or industrial electronics. They also attend classes in cooking, shopping, nutrition, and child care to prepare them for raising children and managing a home. This practical training is combined with work to improve reading, arithmetic, and other basic skills.

The Corpsman's Future. Members graduate from the Job Corps when they are ready either for placement in a job or for more-advanced training outside the program. Graduation may be within months of entrance or after two years, depending on the type of training chosen and on individual progress.

The Job Corps enlists the aid of all organizations, public and private, in placing its graduates. Major companies, including automotive manufacturers, large retail sales chains, and nationwide franchising organizations, hire Job Corps graduates. Businessmen's councils also cooperate, and placement facilities of state employment services are used.

Most graduates find full-time jobs, but many choose other opportunities. Some volunteer for the armed services; some return to school or go on to college; some join the staff of the Job Corps. However, no matter what their choice, all who graduate have taken the first step out of poverty.

Otis A. Singletary
Director, Job Corps

JOB CORPS CENTERS

Location	*Name*	*Number enrolled (July 1, 1965)*
	Conservation Centers	
Winslow, Ariz	Winslow	148
Ozark, Ark	Cass	95
Royal, Ark	Ouachita	110
Pollock Pines, Calif	Sly Park	66
Elk Creek, Calif	Alder Springs	157
Valyermo, Calif	Fenner Canyon	87
Redding, Calif	Toyon	98
Lewiston, Calif	Lewiston	184
Oak Glen, Calif	Oak Glen[1]	84
Collbran, Colo	Collbran	90
Cottonwood, Idaho	Cottonwood	80
Golconda, Ill	Golconda	78
Carterville, Ill	Crab Orchard	86
Branchville, Ind	Branchville	96
Middlesboro, Ky	Cumberland Gap	61
Mammouth Cave, Ky	Great Onyx	125
Lantz, Md	Catoctin	96
South Wellfleet, Mass	Wellfleet	99
Poplar Bluff, Mo	Poplar Bluff	75
Mountainair, N. Mex	Mountainair	105
Grants, N. Mex	Grants	199
Franklin, N.C	Arrowwood	92
Pisgah Forest, N.C	Schenck	199
Dickinson, N. Dak	Dickinson	71
Pedro, Ohio	Vesuvius	86
Hodgens, Okla	Hodgens	103
Glide, Oreg	Wolf Creek	200
Burns, Oreg	Malheur	132
Yachats, Oreg	Angell	126
Tillamook, Oreg	Tillamook	155
Marienville, Pa	Blue Jay	89
Bristol, Tenn	Jacobs Creek	86
Port Angeles, Wash	Neah Bay	105
Curlew, Wash	Curlew	180
Randle, Wash	Cispus	178
Casper, Wyo	Casper	104
	Urban Centers for Men	
Pleasanton, Calif	Parks	1143
Edinburg, Ind	Atterbury	563
Morganfield, Ky	Breckinridge	422
Battle Creek, Mich	Custer	96
Edison, N.J	Kilmer	1111
Astoria, Oreg	Tongue Point	566
San Marcos, Texas	Gary	1317
	Urban Centers for Women	
Los Angeles, Calif	Los Angeles JCC for Women	216
St. Petersburg, Fla	St. Petersburg JCC for Women	258
Omaha, Nebr	Omaha JCC for Women	40
Cleveland, Ohio	Cleveland JCC for Women	267
Charleston, W. Va	Charleston JCC for Women	112

[1] State-related. Source: Job Corps.

THE YOUTH CORPS

The Neighborhood Youth Corps, which operates under the administration of the U.S. Department of Labor, provides work-experience programs for young men and women, aged 16 to 21, from low-income families. The corps, a component of the president's war on poverty, was authorized by the Economic Opportunity Act of 1964. It enables unemployed youths to increase their employability or to resume or continue their education. Members of the Youth Corps work on projects or perform services in the public interest. Conservation programs are especially encouraged.

Sponsors. Local sponsors of Neighborhood Youth Corps projects fall into two general categories—governmental units and private nonprofit organizations. States, counties, municipalities, and authorized subdivisions, such as park commissions, boards of education, municipal hospitals, and state and public libraries, are generally eligible to enter into cooperative agreements with the corps. Voluntary hospitals, private welfare organizations, settlement houses, and other similar nonprofit private organizations also may become sponsors.

The First Year. On Feb. 14, 1965, Secretary of Labor W. Willard Wirtz reported favorably to President Johnson on the first neighborhood youth project, in Newark, N.J. The president, in reply, observed that the 348 boys and girls enrolled in the project had been out of work and out of school but were "now performing valuable services in the city government." More than half of the boys and girls in the program had arranged to attend school at night.

The corps' first year of operation was one of development and organization. Three basic types of work programs emerged: (1) programs for students enrolled in school during the day; (2) summer programs; and (3) full-time work-experience projects for out-of-school youths.

Many Neighborhood Youth Corps projects include activities other than work experience. When needed, remedial education is provided to increase the employment opportunities of out-of-school enrollees. Testing, counseling, job development, and job referral services help youths adjust to the job market. Preselection testing and counseling are utilized to appraise the capacity and potential of individual youths.

A total of 641 Neighborhood Youth Corps agreements were concluded during the 1965 fiscal year. These agreements represented projects in all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. The projects employed more than 280,000 young people, of whom about 60% were men, at a cost to the federal government of about $132,000,000. Approximately 75% of the enrollees lived in urban areas and 25% lived in rural areas or small towns.

Jack Howard
Director, Neighborhood Youth Corps

ADEN STATE, in the Arabian Peninsula, was the scene of rioting against British policies in 1965. At right, youths stage demonstration in the Crater section of Aden on October 4.

PICTORIAL PARADE

ARABIA

A peninsula in southwestern Asia with an area of slightly more than one million square miles, Arabia is bounded on the north by Iraq and Jordan, on the east by the Persian Gulf and the Gulf of Oman, on the south by the Arabian Sea and the Gulf of Aden, and on the west by the Red Sea and the Gulf of ʻAqaba. Arabia comprises four independent states—the Kingdom of Saudi Arabia, the Yemen Arab Republic, the Emirate of Kuwait, and the Sultanate of Muscat and Oman—and 32 states linked with Britain in one form or another. The total population of the peninsula is probably less than 10 million. (For components of Arabia not discussed individually in this article, see KUWAIT, MUSCAT AND OMAN, SAUDI ARABIA, and YEMEN.)

Federation of South Arabia. The federation was established under British auspices in 1959 with six members. It now has 17 members, the most influential of which is Aden State (formerly a British crown colony), which merged with the federation in 1963. Six states in the British Protectorate of South Arabia have thus far declined to join the federation; these include the relatively important Quʻaiti, Kathiri, and Mahri sultanates, all in the eastern part of the protectorate.

The federation has an area of 60,000 square miles and a population of 700,000. The protectorate states outside the federation have an area of 40,000 square miles and a population of 300,000. Aden State covers only 75 square miles, but its population is estimated at more than 200,000.

The year 1965 was a time of crisis for the federation. Britain had promised independence by 1968, but differences over the conditions became acute. Leaders of Aden State insisted on the terms of the United Nations resolution of Dec. 11, 1963, calling for the early removal of the British military base at Aden (though on occasion they indicated readiness to negotiate on this point) and for general elections under a UN supervisory presence before independence. Britain wanted to turn the federation into a unitary state, which Aden resisted out of fear of being submerged by its less-developed neighbors. The upcountry sheikhdoms tended to go along with British policy. Yemeni and Egyptian nationalists, collaborating with dissidents from the federation, campaigned for the elimination of British power.

In March 1965, Sir Richard Turnbull, who had succeeded Sir Kennedy Trevaskis as high commissioner in December 1964, invited ʻAbd al-Qawi Makkawi to replace Zain ʻAbdu Baharoon as chief minister of Aden State. Makkawi had opposed Aden's merger with the federation. At the end of July, Makkawi went to London for talks on the future of the federation, but these proved fruitless. A long series of disturbances in Aden culminated in late August and early September in the assassinations of the British police superintendent, Harry F. Barrie, and the British speaker of the Aden State Legislative Council, Sir Arthur Charles.

On September 25 the British government announced the Aden constitution had been suspended. Makkawi and the other Adenese ministers were dismissed, and direct rule was placed in the hands of the high commissioner. A statement issued by the high commissioner's office said that the Adenese ministers had given public support to the National Liberation Front, headed by Qahtan al-Shaʻbi, which claimed to have perpetrated the assassinations. In October, 12 Arab states laid the situation in Aden before the UN Security Council. Strikes in Aden indicated continued restlessness.

Bahrain. This sheikhdom, under the rule of Sheikh ʻIsa ibn Salman Al Khalifah (acceded 1961), consists of one large island (Bahrain) and a number of smaller ones with a total area of about 230 square miles and a population of 182,203 (1964 census). The capital is Manamah on the main island.

Bahrain possesses only modest oil wealth. The Bahrain Petroleum Company (Bapco) produces about 2.5 million tons a year. The Bapco refinery on Bahrain also processes large amounts of crude oil brought from Saudi Arabia by pipeline.

In March a strike by Bapco workers developed into a general strike marked by rioting. Arab nationalist resentment of British influence and dissatisfaction with the paternalistic Bahrain government contributed to the unrest. The National Progressive Front demanded the right to form trade unions. The situation calmed down in April, though the roots of the trouble remained to be dealt with.

A new currency, the dinar, was introduced on October 16. It replaces the Indian rupee.

Qatar. This sheikhdom, under the rule of Sheikh Ahmad ibn ʻAli Al Thani (acceded 1960), occupies a barren peninsula in the Persian Gulf. It has an area of about 4,000 square miles and a population of about 60,000, roughly half of which is in the capital, Doha.

The Qatar Petroleum Company on the mainland and the Shell Company of Qatar offshore produce

UPI

BRITISH TROOPS and police seek curfew breakers in the Crater area of Aden on October 3, after an outburst of rioting. Fifty Yemenis, later deported, were among 300 seized.

about 9 million tons a year. In 1965, Shell was investing £7.5 million in export facilities on the island of Halul and in other offshore operations.

Popular discontent similar to that in Bahrain brought about a state of emergency in April. The government tried to ease the situation by launching an ambitious program to improve communications, provide houses for indigent families, and develop water and sewage systems.

Trucial States. Six of these sheikhdoms lie on the southeastern coast of the Persian Gulf and the seventh, Fujairah, lies on the Gulf of Oman. The total area claimed is some 30,000 square miles, with a population estimated to exceed 100,000.

Abu Dhabi is the largest and richest of the states, though its population is very sparse. The Abu Dhabi Petroleum Company on the mainland and Abu Dhabi Marine Areas offshore together outstripped the total production of Qatar in 1964, and the tremendous reserves they are tapping indicate that Abu Dhabi will soon be in the front rank of world producers. A new agreement with the Abu Dhabi Petroleum Company, concluded in September 1965, is expected to double the share of profits received by the ruler, Sheikh Shakhbut ibn Sultan al-Falahi (acceded 1928).

No oil has been found in any of the other Trucial states, but Dubai and Sharjah are successful commercial centers. In 1965 the Persian Gulf rulers subscribed to the principle that the richer states should help the poorer, but interstate cooperation has been difficult to secure in the past.

In June, Sheikh Saqr ibn Sultan al-Qasimi (acceded 1951) was deposed as ruler of Sharjah. He charged that the British were responsible, and was welcomed as a hero of Arab nationalism in Baghdad and Cairo.

George Rentz
Curator of the Middle East Collection
The Hoover Institution, Stanford University

ARCHAEOLOGY

Radiocarbon dating of materials found in excavations in Tanzania revealed in 1964–65 that hominids (men or manlike creatures) have inhabited the earth for as many as two million years—a much longer time than was thought probable a few years ago. This article summarizes the year's archaeological research in two sections: (1) Eastern Hemisphere; and (2) Western Hemisphere.

EASTERN HEMISPHERE

There were several notable contributions to Old World archaeology in 1964–65. Among the more important was the early dating of Bed I at Olduvai Gorge, Tanzania, a discovery which makes it certain that a much greater time must be allowed for hominid evolution and cultural development than seemed probable a few years ago. Another significant development was the new light thrown on the calendar-making abilities of prehistoric man. Evidence was presented for the existence of a lunar calendrical system in the Upper Paleolithic of Europe, and the hypothesis that Stonehenge was a calendrical calculator was reinforced.

The Lower Paleolithic sites of Torralba and Ambrona, Spain, revealed a substantial bone industry, the earliest such industry for which there is proof. Farther east, the work at Mohenjo-Daro, West Pakistan, contributed new evidence about the origins, development, and fall of the Indus civilization.

Early Date for Olduvai Reinforced. A sample of volcanic material from a layer known as Bed I at Olduvai Gorge, Tanzania, was dated by the fission-track method to 2.03 ± 0.28 million years. The sample was taken from the same deposits as two potassium-argon samples, KA 847 and KA 1043, which yielded dates of 1.85 and 1.76 million years, respectively. Because the results achieved by these two independent methods overlap substantially, they appear to be mutually supporting. This part of Bed I at Olduvai yielded both early hominid remains and stone artifacts.

Prehistoric Calendars. Gerald Hawkins of the astronomy department of Boston University first published in 1963 and 1964 his interpretation of Stonehenge, England, as a calendrical computer. Acceptance of this interpretation depended to some extent on finding other similar monuments, to which a calendrical function could be attributed. Recently, Hawkins studied the stone alignments and circle at Callanish in the Outer Hebrides, Scotland, and suggested that this monument served a purpose similar to that of Stonehenge.

Early Bone Artifacts. F. Clark Howell, professor of anthropology at the University of Chicago, and his associates continued their analysis of the Lower Paleolithic occupation sites at Torralba and Ambrona in Soria province, Spain. These sites appear to have been situated on a big-game migration route, and investigators identified a bone industry whose raw material was mainly the limb bones of an extinct species of elephant, *Elephas antiquus*. Using stone tools, they experimented with bone from a young (modern) African elephant and were able to make approximate replicas of the bone artifacts from these two sites.

New Light on the Indus Civilization. Excavation of Indus civilization sites had indicated a remarkably static cultural uniformity, but preliminary work at Mohenjo-Daro, West Pakistan, showed the first evidence of cultural change during man's long occupation of this region. Both hydrological and archaeological studies suggested an explanation for the final abandonment of the site: silt levels in the occupation areas and a 70-foot-thick retaining wall of brick, probably built as a flood-prevention measure, indicate that there was temporary flooding. Continued battles with flood waters may have led eventually to the abandonment of the city. For the first time, the lowest occupation level was determined. Boring showed that occupation levels at Mohenjo-Daro go down to 39 feet below the present level of the surrounding plain, and 24 feet below the modern water table.

Town Planning in Neolithic Turkey. Continued excavations at Çatal Hüyük, in southwestern Turkey, have brought forward yet more evidence of Neolithic ritual. The work at this site in 1965 revealed a degree of Neolithic town planning not evident from previous work. The houses are aligned in rows and blocks, with storerooms filling the gaps. Many walls are aligned over some distance, with house plans alternating between a long side and a short side facing the street. With some modifications, this plan can be seen to persist over a period of time. These discoveries imply a considerable sense of social organization and a measure of surveying ability on the part of the inhabitants.

Neolithic Idols in the Cyclades. Excavation of a Neolithic site continued on Saliagos, one of the Cycladic islands of Greece. It now appears that the site was originally fortified, a rarity for the Neolithic period and the area. An underwater survey demonstrated that at the time of Neolithic occupation, Saliagos was linked by dry land with two other islands of the Cyclades group, Paros and Antiparos. Probably the most important finds of the 1965 season were two marble figurines. One is of the Cycladic "fiddle idol" type, a stylized human figure shaped like a violin. The other is more naturalistic and resembles examples from Anatolia.

Earliest Greek Colony in Italy. On the island of Ischia, excavations were begun on the acropolis at Pithekussai, traditionally the earliest Greek colony in Italy. Work on the acropolis has already yielded pottery of the 8th century B.C., and material that demonstrates contact with Etruria.

Minoan Trading Post. Excavations on the island of Kythera, off the southern coast of Greece, demonstrate that this Bronze Age settlement was culturally Minoan as early as the Middle Minoan I period, early in the 2nd millennium B.C. It was probably a wealthy trading outpost of the Cretan "Minoan Empire." The site apparently was occupied until about 1450 B.C., then abandoned.

Byzantine Church. The Church of St. Polyeuktos, built between 524 and 527 A.D., has been identified in Istanbul. This church antedates by a few years the building of St. Sophia by the Emperor Justinian. The excavations, begun in 1965, should throw considerable light on the development of Byzantine architecture.

"Dark Age" Site at Glastonbury. As a part of the lengthy research at Glastonbury, England, excavations were started recently on Glastonbury Tor. The present site of Glastonbury Abbey cannot be dated earlier than about 600 A.D., but potsherds of the 6th and possibly 5th century A.D. have been found at Glastonbury Tor. These fragments were imported from the eastern Mediterranean, and provide additional evidence of contact between that area and Celtic Britain. In addition, the 1965 excavation revealed an enameling workshop, a discovery of considerable importance for the study of metalworking in the British Isles.

Problem of the "Brochs" Solved. A problem of considerable importance to Scottish archaeology was solved as a result of the excavations at Clickhimin, Shetland, by John R.C. Hamilton. The origin of "brochs," stone towers dating to the earlier 1st millennium A.D., has been uncertain and open to considerable speculation. The excavations at Clickhimin show a series of buildings, the first being a small stone-walled fort of the 4th to 2nd centuries B.C. This fort had tenemented buildings against the inside of the wall, and as time went on the exterior walls were raised until the fort became a tower, or "broch." This upward extension was probably a protection against attack by fire, which, as is evidenced by the many vitrified forts in Scotland, was a potent siege weapon.

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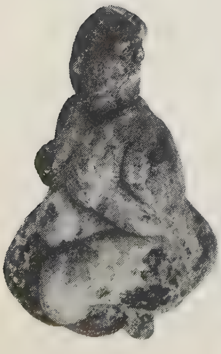
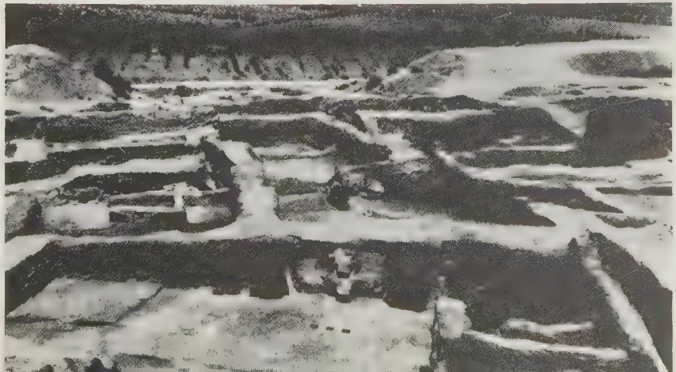
WESTERN HEMISPHERE

The Bureau of American Ethnology and the Department of Anthropology of the United States National Museum merged in 1965. The new organization, known as the Smithsonian Office of Anthropology (SOA), is divided into a Division of Cultural Anthropology and a Division of Physical Anthropology. The SOA will cooperate with the National Park Service in archaeological salvage operations of the River Basin Surveys. Bureaus of American Ethnology bulletins will discontinue publication with No. 200. They will be replaced by a new series, *Smithsonian Contributions to Anthropology.*





EXCAVATING ANCIENT TURKISH CITY of Çatal Hüyük (*below*), investigators found that its inhabitants possessed a rudimentary knowledge of town planning. Statues of females (*right* and *left*) were found in the ruins.

KEYSTONE

Georgia. Cooperation continues between industries and scientific institutions in salvaging prehistoric sites endangered by the expanding U.S. economy. Georgia Kraft Company, presently constructing a $45 million paper mill near Cottonton, Ala., will salvage archaeological data which would otherwise be lost through the construction of the mill and its supporting services.

Virginia. Members of the Virginia Archaeological Society helped excavate the first fortified Indian village to be discovered in the Shenandoah Valley of northern Virginia. In addition to a stockade line, the site has yielded hut outlines, pottery, stone and bone tools, charred corn and nuts, and a number of graves. The Shenandoah Valley was a main north-south route for Iroquois war parties, which probably explains the use of fortifications. Pottery recovered indicates that the site belonged to the late prehistoric period, perhaps the late 16th century.

Nearly 700 items were recovered from the sludge below the waterline of a garden well on the John Custis IV property at colonial Williamsburg, Va. Unusually well preserved because of having been sealed in the mud below the waterline were such plant remains as Dutch holly and American boxwood leaves, as well as twigs and leaves of 17 other plants from the period 1730–46. Among other materials recovered were over 70 bottles labeled "John Custis 1713."

Florida. Probably the most spectacular find of the past year was in underwater archaeology. Salvage operations off the east coast of Florida, near Ft. Pierce, brought up treasure reportedly worth $1.6 million. The treasure was believed to have come from one or more of the 10 ships of the Spanish Plate Fleet that were wrecked in this area during a hurricane in July 1715. Included in the recovered treasure are silver and gold coins, jewels, silver ingots, and a variety of other objects. The recovered objects are important historically and interesting archaeologically.

Kansas. In the Great Plains, two parties financed by National Science Foundation grants obtained new data on contacts between Plains and Pueblo Indians. One party, excavating a site in central Kansas, uncovered two long, narrow house pits and a number of storage artifacts. Potsherds of the local ware were common, and included some 40 sherds of glaze-paint Rio Grande ware, as well as a few scraps of metal and a glass bead. The site is believed to date between 1500 and 1650 A.D. The second party, working in western Kansas, also recovered Pueblo sherds as well as a turquoise bead. These came from the floor of what was apparently a hogan-like structure, and were like the ware of the Dismal River Indians of Kansas and Nebraska.

Utah. In the Green River basin of northeastern Utah, excavations were made in a stratified site near a high mountain spring. Lower levels yielded lanceolate projectile points believed to date from between 4000 and 2000 B.C. Upper levels of the site had side-notched points belonging to the late prehistoric or historic period. In northern Utah a site of the Fremont culture was excavated. The 10 circular pithouses uncovered were two feet deep and from 13 to 19 feet in diameter. Each had a central clay-rimmed firepit and four roof supports. Several subfloor storage pits had similar features. Seven burials were discovered, augmenting the scanty skeletal material available from this culture. Artifacts were typical of the Northern Fremont.

Guatemala. Two vaulted and brilliantly decorated tombs containing the skeletons of five persons who died in the 1st century B.C. were uncovered beneath a small shrine-like building deeply underlying the north acropolis at Tikal, a ruined city in northern Guatemala. Tunneling exposed the shrine, which was decorated with exterior polychrome frescos of six ornately garbed individuals painted in black, red, pink, and yellow. The first tomb contained three skeletons. One skeleton was of an adult, on whose chest had been arranged two large, lidded bowls. One bowl contained the disarticulated remains of an adult and the other the articulated skeleton of an infant. In the second tomb were found the remains of an adult; at his feet was a second figure who had originally been seated. Six human figures had been painted in black on the red plaster walls.

Mexico. Salvage operations at Rancho La Ventilla, at Teotihuacán, Mexico, were devoted largely to a single complex, Palace B, the full extent of which is still unknown. Preparation of the land for irrigation had removed the uppermost construction, but the remaining buildings began with early Teotihuacán II, and extended into early Teotihuacán III. A major accomplishment of this work was the recovery of 180 burials and some 4,000 pottery vessels. Several burials yielded remains of fibrous wrappings which had been painted red. Cremation was rare. Miniature vessels were abundant. Burial offerings included figurines of a white material resembling stucco, as well as many tiny manos (grindstones) of unbaked clay. Five small altar-like masonry platforms were found, four of which contained infant burials. Several poured-adobe walls were found, some with burials in them.

Caribbean. The islands of Aruba, Curaçao, and Bonaire in the Netherlands Antilles were surveyed and test excavations were carried out. Preliminary reports indicate the presence of sites from Paleo-Indian, Meso-Indian, and Neo-Indian periods. Two large Arawak village sites were discovered on the northwestern coast of Haiti. At one site, archaeologists found aboriginal gold ornaments in the refuse. The Marban site, in the Dominican Republic, has yielded a radiocarbon date of 2170 ± 160 B.C., which is by far the earliest date yet obtained for any site in the West Indies. In Jamaica, the Arawak White Marl site between Kingston and Spanishtown, where great numbers of shells and animal bones were recovered, is expected to yield significant data on Arawak dietary patterns in Jamaica during the period 900 to 1400 A.D.

Colombia. The Puerto Hormiga shell mound may rank with the Valdivia sites in Ecuador in producing the oldest pottery known in the Americas. A charcoal sample has been dated at 2250 ± 250 B.C., corroborating the earlier determination of 2910 ± 170 B.C. obtained from a shell sample. Puerto Hormiga pottery from all levels of the excavation includes crude fiber-tempered ware in consistent association with a more sophisticated sand-tempered ware. The latter ware bears incised, punctate, and relief decoration.

Ecuador. Work continued in the vicinity of the El Inga Paleo-Indian site near Quito, Ecuador. It consisted of surface collecting, as well as test excavation, in the hope of discovering deeper and more significant stratigraphy. The tests had as an additional purpose the acquisition of carbon for dating.

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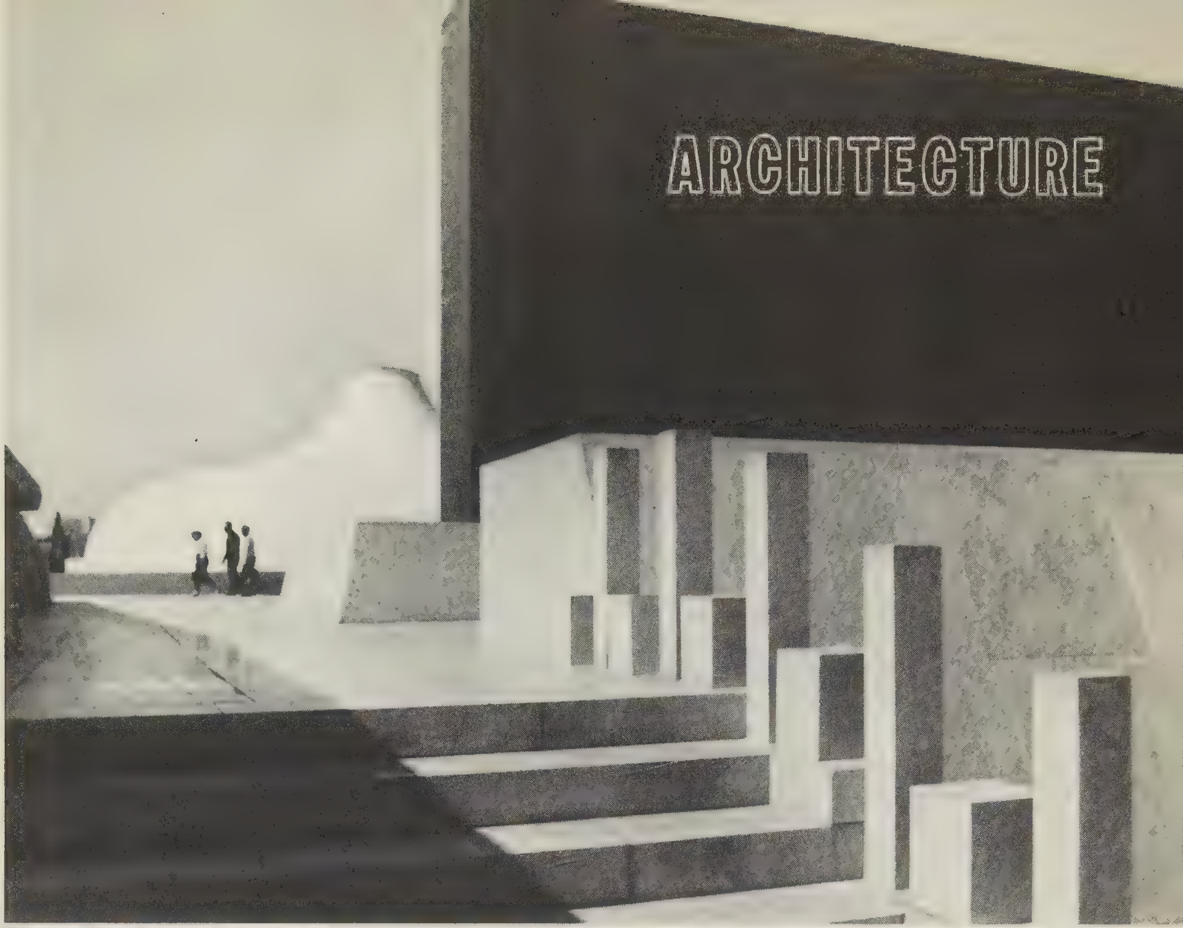
ARCHITECTURE



PIX

DESIGN OF NEW NATIONAL MUSEUM IN ISRAEL, by American architect Frederick Kiesler, employs white and black to symbolize purity and suffering.

ARCHITECTURE

Although it was becoming more and more difficult to justify further concentrations of commercial activity in the downtown sections of American cities, existing urban renewal projects were continued and new ones were begun in 1965. The year also saw innovations in the use of building materials and the execution of new concepts in structural design. And one of the giants of modern architecture, Le Corbusier, died in August 1965.

Urban Renewal Projects. A characteristic urban renewal project is Constitution Plaza in Hartford, Conn. Here, distinctive glass-walled buildings—one is boat-shaped in plan and the others are rectangular—housing a hotel and offices are disposed around wide and handsomely landscaped plazas on the roof of a multistory parking structure. The plaza level stands on wide bridges well above the existing street grid. The project is much admired for the elegance of its design, especially the landscaping by Sasaki, Dawson, and DeMay, but it has been criticized for not fitting in with the remainder of downtown Hartford.

A number of other American cities are attempting, without extensive rebuilding, to bring new life to their downtown areas. The main street of Fresno, Calif., was turned into a pedestrian mall by Victor Gruen and Associates, with sculpture, fountains, kiosks, and gardens. Similarly, Tarapata-MacMahon Associates enlivened the central square of Canton, Ohio; and an American Institute of Architects award was given to Eugene, Ore., for its downtown renewal project. Privately financed redevelopment in the center of Rochester, N.Y., produced a covered, air-conditioned shopping mall—Midtown Plaza—for which Victor Gruen and Associates were architects.

These projects are designed to retain in downtown areas the glamour that is attaching itself to those enormous suburban shopping centers and their acres of parking facilities. They must offset, in the colder and wetter parts of the country, shopping centers with covered malls where, as the advertisements for a center in Tacoma, Wash., put it, it is "70° and dry". (See also CITY PLANNING.)

New Arenas. The move indoors, with the accelerating development of air-conditioning equipment and of structural methods for spanning wide spaces, is not confined to cold climates or to shopping centers. Houston's Astrodome, covering a baseball field, spans 642 feet of air-conditioned interior space (see HOUSTON). Far more dramatic are two arenas designed by Japanese architect Kenzo Tange for the 1964 Tokyo Olympics, which bring great crowds indoors under structures held aloft on concrete masts suspended by steel cables and sweeping downward into horizontal arches. Two masts hold the roof over a swimming pool building, and one carries the roof over a stadium for basketball.

New Building Complexes. Another complex of Kenzo Tange's, the Yamanashi Broadcasting Center in Japan, is almost a small city, formed of hollow masonry cylinders that contain services and vertical circulation, and support the corners of enormous rooms hung in space. A contemporary phenomenon of striking similarity is the Knights of Columbus building in New Haven, Conn., designed by Kevin Roche of Eero Saarinen & Associates. The floors of this 35-story building are to be held on four hollow cylindrical columns at their corners. The building will be diagonally placed on the street grid, the better to serve as entrance to the city from a highway connector.

Notable Structure. The year's most dramatic project by Eero Saarinen & Associates was the Gateway Arch in St. Louis, Mo. It was the realization of the plans for which Eero Saarinen had won the 1947 competition held to choose the best design for a riverside park in the city. The great, parabolic-arched "gateway to the West," built along the Mississippi River, was topped out in 1965. (See SAINT LOUIS.)

Two other major urban structures designed by the Saarinen firm were both in Manhattan. One—a high-rise building distinguished by a great glassed court around which the offices will rise—is being designed for the Ford Foundation. The other, completed and occupied in 1965, is the Columbia Broadcasting System's 38-story concrete building on New York's Avenue of the Americas. It is distinguished by the simple, solid covering of the building's frame with triangular, granite-covered piers. The piers project from the plan of windows so that when viewed from an angle the wall of the building seems made entirely of the heavy stone and the windows seem to disappear. The piers are unadorned at the top and plunge without modification into a granite base below the sidewalk level. The building stands free on all four sides, and in an area of huge thin and shining structures mostly of glass, it carries an air of extraordinarily impressive solidity.

Far higher than the powerful mass of the CBS Building, the John Hancock Center, whose architects are Skidmore, Owings, and Merrill, is scheduled to be built on the Chicago lakefront. The building's tapered shaft will rise 100 stories to a height of 1,100 feet, and will be braced by great diagonal struts. The Alcoa building in San Francisco, by the same firm's branch office, similarly demonstrates diagonal bracing in its outer surface.

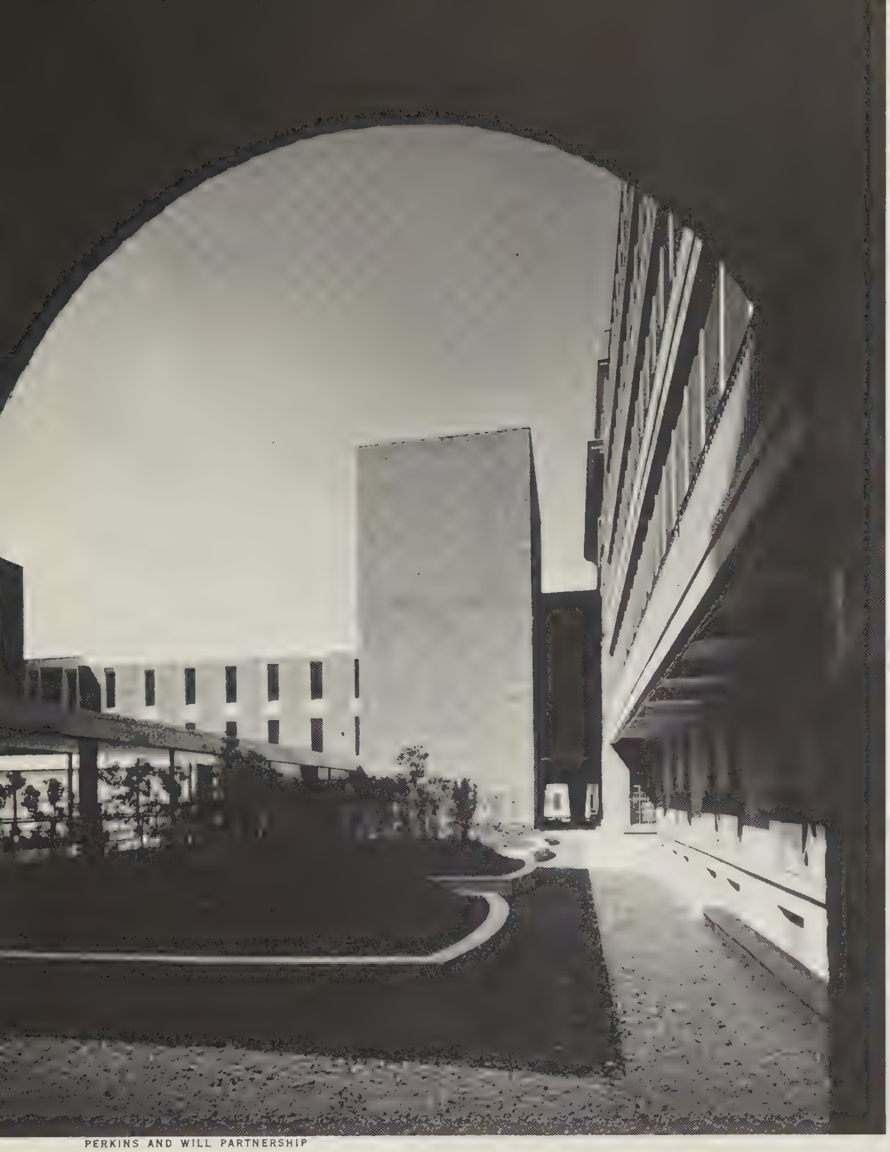
Other Projects. Two small architectural commissions demand attention for their independence. One, a house by Robert Venturi for his own use, in Chestnut Hill, Pa., is at first glance a conventional gabled house with lopsided fenestration, but on closer inspection displays an attempt to reconcile contrasts. Described by one critic as a "rational ambiguity" and a "consistent distortion," the house can be considered a piece of "serious whimsy" of polemic importance far beyond the limits of the building itself. The other project is the design by the young Dutch architect Aldo Van Eyck for a Protestant church in the Netherlands. Called the "Wheels of Heaven," it combines four skylit circles into an irregular square in order to achieve at once an inward- and outward-looking form whose interaction the architect conceived as essential to his building task.

Le Corbusier. On Aug. 27, 1965, the great Swiss-French architect, Charles-Edouard Jeanneret-Gris, known for decades as Le Corbusier, died while he was swimming in the Mediterranean. The man who had come increasingly to be honored for his innovations and inventions, from the skyscrapers in the park to the clear expression of skeletal structure to a latter-day masking of concrete sculptural form, was at the height of his powers, with his studio full of work in progress and his influence far and away the most powerful in the world.

One of Corbusier's projects, a city hospital in Venice, is of especial interest for its horizontally organized, separated but carefully connected pavilions, some of which are positioned on columns over the Venetian lagoon. The whole building is at

ROGER STURTEVANT

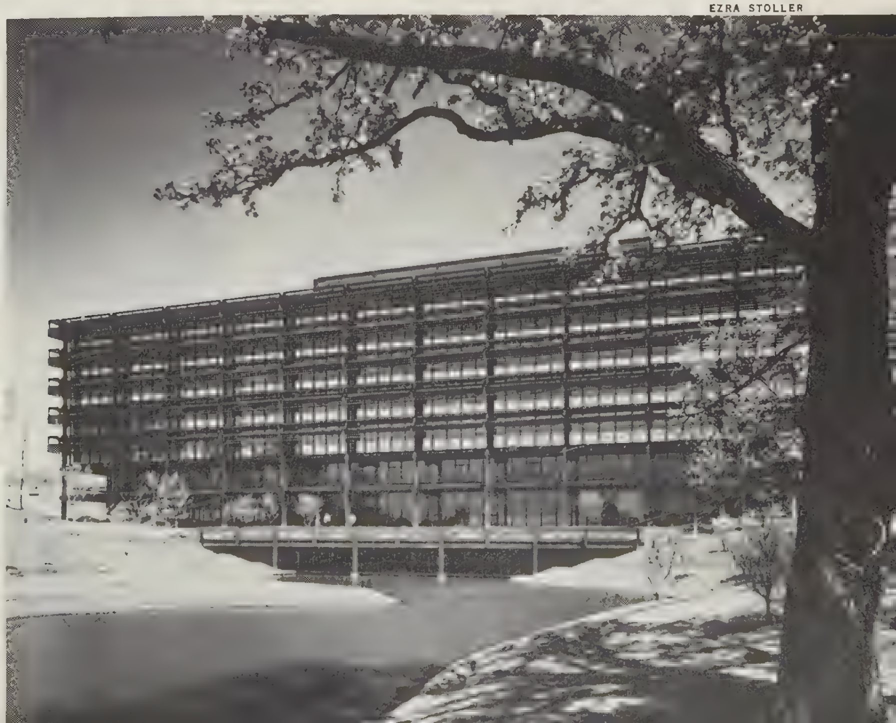
INTERIOR OF CHAPEL in Pebble Beach, Calif., using unfinished wood and local fieldstone to echo strength and dignity of natural surroundings, won American Institute of Architects award for designer Robert F. Olwell.



PERKINS AND WILL PARTNERSHIP

MEDICAL CENTER in New Haven, Conn., was completed in 1965. All buildings of the Yale-New Haven Medical Center are grouped around a spacious and sunny courtyard area. The center was designed by the Perkins and Will Partnership, with E. Todd Wheeler as consultant.

EZRA STOLLER



OFFICE BUILDING in Moline, Ill., designed by Eero Saarinen & Associates, spans a stream. For unity, both interior and exterior use steel that has formed a self-protecting oxide. The design won a 1965 AIA first honor award.

ROBERT DAMORA

FOR PREFABRICATED HOUSE on Cape Cod, Mass., architect Robert Damora received a 1965 AIA award of merit.

once an efficient hospital design and an integral part of the dense fabric of the city of Venice. The design shows how far Corbusier had come since his youthful pronouncements of 1922 when he proposed the widespaced elevated skyscrapers in a park that still provide the image for the rebuilding of our cities.

Awards. The 1965 American Institute of Architects First Honor Awards went to the Eleanor Donnelly Erdman Memorial Chapel at Pebble Beach, Calif., for which Robert Olwell of Reid & Tarics was the designer. It is a simple and sensitive gable-roofed, pole-supported, lattice-walled small chapel in a pine forest. Another award went to Sert, Jackson, & Gourley for Harvard University's married students' housing facility—a complexly wrought and thoughtfully integrated group of three-, five-, and seven-story terraced rows and three 22-story towers, built around courts. An award went to I.M. Pei and King and King for the Syracuse (N.Y.) University School of Journalism—an opulent freestanding pavilion, planned in the shape of a Greek cross, under a heavy square roof, on a large base. And finally, an award was given to Eero Saarinen & Associates for the John Deere Administrative Center in Moline, Ill., whose exposed frame of self-controlled rusting steel is set across a valley on a beautiful wooded site.

AIA Merit Awards went to Crites & McConnell for a house in the woods, Cedar Rapids, Iowa; to Kirk, Wallace, & McKinley for a Japanese Presbyterian Church in Seattle, Wash.; to William D. Warner for the Gordon School, a small village-scale school building in East Providence, R.I.; to Roger Lee Associates for apartments in Berkeley, Calif.; to R. Gommel Roessner for a complex of apartments grouped around an intimate court in Austin, Texas; to Robert Damora for a prefabricated tract house at New Seabury, Cape Cod, Mass.; and to Clark & Beuttler for an addition to an old building on Market Street in San Francisco, Calif.

CHARLES W. MOORE
Chairman, Department of Architecture
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ARCTIC REGIONS

The United States, Canada, and the Soviet Union continued to conduct scientific research in Arctic regions during 1965.

United States. A major project of the Arctic Research Laboratory at Barrow, Alaska, has been the operation of two drifting ice stations in the Arctic Ocean. One of the stations, Arlis II, an ice island about 70 feet thick, was used as a base for research in marine geophysics, oceanography, marine biology, and meteorology. After four years of occupation, Arlis II drifted into the swift East Greenland Current, which swept it rapidly southward into warmer waters between Iceland and Greenland early in 1965. The 21 scientists on the ice island were placed in a hazardous position, but they were rescued by the U.S. Navy icebreaker *Edisto* on May 8, 1965.

The other drifting station, Fletcher's Ice Island, continued to be a base for oceanographic research. This station has been in use since 1952.

The U.S. Coast Guard icebreaker *Northwind* made an oceanographic survey of the Kara Sea and the northern part of the Barents Sea during the summer of 1965. The original plan was to make the first traverse of the Northeast Passage by a United States ship, but the planned west-to-east passage across the top of Eurasia was not completed because of political considerations in reference to the USSR. The *Northwind* turned back at the Vilkitski strait between the Taimyr Peninsula and Severnaya Zemlya, but the trip was successful because hydrographic, gravitational, and magnetic data were collected over the broad Soviet continental shelves.

Early in September the University of Alaska was host to the First International Scientific Meeting on the polar bear. The meeting was attended by delegates from Canada, Denmark, Norway, the USSR, and the United States. The presentations made by each country stressed the need for some form of restriction on killing polar bears.

Canada. The Polar Continental Shelf Project continued into its sixth year of geophysical, hydrographic, and geodetic surveys of the northern Canadian islands and continental shelf. Seismic studies across the sedimentary basins of the continental shelf are delineating the crustal structure in that region. Systematic gravity surveys were made on a five-mile grid spacing over a wide area.

Two interesting discoveries were made in the Mould Bay region in 1965. One finding was that seismic waves in the region had velocities that were strongly dependent on azimuth. The other was the remains of a Jurassic plesiosaur. The plesiosaur, a marine reptile about 35 feet long, was excavated.

Canadian research facilities continued to be active. The Northern Canadian Research Laboratory at Inuvik is making biological and environmental investigations in the Mackenzie River delta. The McGill Subarctic Laboratory at Schefferville in Labrador specializes in the study of permafrost. The newest Canadian research facility, which specializes in oceanography and glaciology of Arctic fjords, is located at Tanquary Fjord on Ellesmere Island.

Soviet Research. The USSR continued to operate drifting research stations in Arctic regions. Station SP-12 was evacuated in April 1965, and SP-14 was set up in the Chukchi Sea during the same month. SP-13 was in operation throughout the year.

KENNETH L. HUNKINS
Senior Research Associate
Lamont Geological Observatory

ARGENTINA

Argentina continued to recover from the recession of 1962–63, although its economic growth was slower in 1965 than in the previous year. In addition to pressing economic problems, the country experienced a widening polarization of political forces between Peronist and anti-Peronist groups, and there were renewed outbreaks of violence by extremist elements. In the field of foreign affairs, Argentina's relations with the United States were impaired by the U.S. military intervention in the Dominican Republic.

Political Division. The struggle between supporters and opponents of exiled former President Juan Domingo Perón came to a head in the congressional election of March 14, which was a test of strength for the 17-month-old government of President Arturo U. Illia. Leaders of the Peronist Popular Union party (UP) were granted full political freedom during the campaign, but candidates of Illia's People's Radical party (UCRP) asserted that support of the UCRP was the only alternative to a return of dictatorial Peronism.

This tactic was only partly successful. In the contest to elect 99 of the 192 members of the Chamber of Deputies, the UP and some smaller Peronist-oriented parties won 35% of the popular vote, while the UCRP received 29%. The UCRP retained 69 seats, or 36% of the voting strength in the chamber, but the Peronists gained 36 seats for a total of 52, or 27%. The chief losers were the seven center and rightist parties, which held 51 seats (27%) among them. The remaining 20 seats (10%) were scattered among small left-wing and independent parties.

With its limited strength, President Illia's government found it difficult to secure important legislation in the new congress and to maintain party loyalty. Senators Ricardo Bassi and Edgardo Acuña, leaders of a rebel bloc in the UCRP, resigned from the party when the government decided to increase its contribution to the International Monetary Fund despite a campaign pledge by President Illia to sever relations with the fund.

Dissatisfaction with the government's policies was also reflected in the resignation on November 23 of Gen. Juan Carlos Onganía, army commander in chief. As leader of the Colorado faction in the armed forces, Gen. Onganía had supported President Illia. His resignation stirred rumors of a military coup that failed to materialize.

Peronist Activities. Through their domination of the General Confederation of Workers (CGT), the Peronists harassed the government during the year by carrying out the fourth and fifth stages of their battle plan initiated in 1963. The fourth stage included three crippling 24-hour strikes by employees of the state railway system in February. The unions obtained a retroactive wage increase of 25% and an additional 17% increase in 1965.

The fifth stage of the battle plan, announced on May 1 by José Alonso, secretary general of the CGT, was less successful. CGT leaders publicly demanded the recall of Perón from Spain. Mrs. Isabel Perón, third wife of the ex-dictator, arrived in Buenos Aires to lead a rally on October 17, the 20th anniversary of Perón's rise to power. The government issued a decree barring political activities by labor unions, and violent clashes ensued among Peronists, anti-Peronists, and the police.

The Tacuara Movement. The Tacuaras, an ultraconservative nationalist group with Nazi affiliations, caused disturbances during the year. In January, police discovered a cache of arms and evidence of a plan to attack the homes of 25 prominent Argentine Jewish leaders. Horst Eichmann, son of the executed Nazi war criminal, Adolf Eichmann, was one of the 636 persons suspected of terrorism who were arrested in August after the slaying of two university students, but he was released with 59 others for lack of evidence.

Domestic Problems. Economic problems intensified political unrest during 1965. The cost of living rose 22% in 1964, and climbed 23% in the first ten

ARGENTINA · Information Highlights

S. AMERICA
AFRICA

Area: 1,072,067 square miles.

Population: 22,352,000 (July 1, 1965 est.).

Chief Cities (1960 preliminary census): Buenos Aires, the capital, 2,966,816; Rosario, 671,852; Córdoba, 589,153; Matanza, 402,642.

Government: *President*—Arturo U. Illia (took office Oct. 12, 1963); *Vice President*—Carlos H. Perette; *Parliament*—Chamber of Deputies, 192 deputies; party seating (1965): 69 UCRP members, 52 UP and smaller Peronist party members, 71 other party members. Senate, 46 senators.

Religious Faiths: Roman Catholics, 88.5% of population; others, 11.5%.

Education: *Literacy rate* (1960)—91.4% of population aged 14 and over. *Total school enrollment* (1962)—3,772,955 (primary, 2,933,045; secondary, 155,699; teacher-training, 151,897; technical, 339,353; higher, 192,961).

Finance (1965 est.): *Revenues,* $1,947,000,000; *expenditures* $2,377,000,000; *monetary unit,* peso (188 pesos equal U.S.$1).

Gross National Product (1962): $8,320,000,000.

National Income (1962): $6,758,000,000; average annual income per person, $316.

Economic Indexes (1964): *Industrial production,* 103 (1958=100); *agricultural production,* 119 (1956–57=100); *cost of living,* 600 (1958=100).

Manufacturing (metric tons, 1964): Petroleum products (1963), 13,338,000; cement, 2,817,000; meat (1963), 1,483,200; wheat flour, 2,244,000; crude steel, 1,265,000; sugar, 998,000; cotton yarn, 89,160.

Crops (metric tons, 1964–65 crop year): wheat, 9,150,000 (ranks 7th among world producers); maize, 4,900,000 (world rank, 7th); citrus fruit, 822,000 (world rank, 7th); grapes, 2,190,000; rye, 685,000; barley, 820,000; oats, 800,000; wool (1963), 186,000 (world rank, 4th); peanuts, 420,000 (world rank, 6th).

Minerals (1964): natural gas (1963) 110,313,000,000 cubic feet (world rank, 10th); crude petroleum, 100,370,000 barrels (world rank, 14th); lead, 25,641 metric tons (world rank, 19th); silver, 1,944,509 troy ounces (world rank, 17th); uranium, 11 metric tons (world rank, 7th).

Foreign Trade (1964): *Exports,* $1,410,000,000 (chief exports, 1964: meat, $303,000,000; wheat, $223,000,000; maize, $156,000,000; wool, $117,000,000); *imports,* $1,077,000,000 (chief imports, 1963: nonelectrical equipment, $242,500,000; transport equipment, $177,500,000; iron and steel, $93,300,000; electrical equipment and apparatus, $80,800,000). *Chief trading partners* (1963): U.S. (took 11% of exports, supplied 26% of imports); Italy (took 16% of exports, supplied 13% of imports); West Germany (took 7% of exports, supplied 11% of imports).

Transportation: *Roads* (1964), 84,008 miles (14,156 paved); *motor vehicles* (1964), 1,264,721 (automobiles, 696,848); *railways* (1963), 22,790 miles; *merchant vessels* (1964), 163 (1,115,000 gross registered tons); *state airline,* Aerolineas-Argentinas; *principal airports*—Bahía Blanca, Buenos Aires, Córdoba.

Communication: *Telephones* (1964): 1,425,002; *television stations* (1964), 13; *television sets* (1964), 1,600,000; *radios* (1963), 5,500,000; *newspapers* (1959), 233 (daily circulation, 3,186,000).

WIDE WORLD

ARTURO UMBERTO ILLIA, president of Argentina since Oct. 12, 1963, has tried to bring governmental stability to a country beset by serious economic problems and torn by civil strife. His efforts to develop Argentina's resources and to end their exploitation by foreign interests became more difficult to accomplish in 1965, when his opponents, the Peronists, made substantial gains in congressional elections.

The son of Italian immigrants, Illia was born in Pergamino, Buenos Aires province, on Aug. 4, 1900. He received a medical degree from the National University of La Plata in 1927 and became a practicing physician. He was elected to the provincial senate of Córdoba in 1935. Consistently anti-Peronist, he served as vice governor of Córdoba from 1940 to 1943, and in the Chamber of Deputies from 1948 to 1952, when opponents of Perón were dismissed from office. His election as governor of Córdoba in 1962 was voided by the Peronists. He was elected president of Argentina on July 29, 1963.

months of 1965. Argentines ate less beef, as the government shipped more meat to maintain export levels. In July, two large United States-owned meatpacking plants shut down and laid off 4,800 employees. The companies blamed their losses on rising costs and an overvalued peso.

A large factor in the inflation was the continuing budgetary deficit, which obliged the government to turn to the Central Bank for more credit and paper money. About half the deficit was due to losses in operating the state railways. After increased fares failed to solve the problem, the government in August proposed a sweeping reorganization of the rail system by reducing the work force from 200,000 to 160,000 in four years and modernizing equipment. The unions involved immediately expressed opposition, and the plan was scaled down.

Increased outputs in the steel, automotive, and synthetic fiber industries were signs of industrial recovery, although the gross domestic product increase in 1965 was not expected to equal the 8.4% increase of 1964. Unemployment, which reached 250,000 in Greater Buenos Aires in mid-1963, was cut in half a year later and further reduced in 1965. The government urged employers and unions to limit wage increases to the 22% granted to state employees, but most private settlements were higher.

External Economic Problems. Argentine experienced serious foreign trade difficulties in spite of its having achieved the largest wheat exports in 25 years. The Soviet Union ordered 2.1 million tons, and Communist China 2.6 million. The sale of wheat to China and half the sale to the Soviet Union were for hard currency, with the remainder going for petroleum fuels and machinery. The government also entered barter agreements with the United Arab Republic and Italy to obtain oil in exchange for wheat.

It was estimated that the country would have to import $101 million worth of oil products in 1965 to meet shortages due partly to the decline in domestic production after the cancellation of contracts with 13 Argentine and foreign drilling companies in 1963. Following extended negotiations, most of the disputed agreements were settled in 1965, and several companies were expected to continue operations under restricted conditions.

ELECTIONS IN ARGENTINA gave rise to noisy Peronist demonstrations featuring portraits of Juan and Eva Perón.

WIDE WORLD

By the end of 1964 the Argentine government had the third largest external debt among the developing countries, after India and Brazil. The total foreign debt was $3,356 million, including a public debt of $2,424 million. After months of discussion, 12 of Argentina's creditor nations (10 western European countries, the United States, and Japan), known as the Paris Club because they hold their conferences in Paris, agreed to postpone 60% of the payments due on commercial credits in 1965.

The government at first rejected the advice of International Monetary Fund experts to impose austerity measures on grounds that these would interfere with economic recovery. However, it later mended relations with the fund and with the International Bank for Reconstruction and Development in order to qualify for additional assistance. Argentina sought a $40 million standby loan.

Because of difficulties in meeting the balance of payments and in marketing exports, the peso was devalued three times during 1965. The latest devaluation on December 5 set the exchange rate at 188 pesos to the U.S. dollar. In 20 months the official value of the peso declined 29%.

Foreign Affairs. Relations between Argentina and the United States were strained by several events in 1965. In February, government officials charged that the United States was withholding aid under the Alliance for Progress until the oil contract dispute was settled. This was denied by Ambassador Edwin M. Martin.

During the Dominican crisis in April, Argentina promised to contribute troops to a hemispheric peace force. However, hostility in the congress prevented the administration from complying, and the repercussions set off a cabinet crisis in June.

During anti-American demonstrations, Allison Temple Wanamaker, U.S. consul in Córdoba, was seriously wounded by unknown attackers on June 7. A reduction in Argentina's sugar quota for 1965 by the U.S. Congress also created bad feeling.

A long-standing border dispute between Argentina and Chile became critical when a Chilean guard was killed by an Argentine patrol on November 9. A joint commission was set up to negotiate a settlement.

JAMES H. STREET
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FLOODS IN ARIZONA struck the Phoenix and Tucson areas in late December 1965. Here, a lineman works above the rampaging Salt River to restore electric power after a transmission tower collapsed.

UPI

ARIZONA

Arizona's regular legislative session in 1965 was held from January 11 to April 20—a record-setting 100 days. The Legislature passed 110 bills, one of which was vetoed by Democratic Gov. Sam Goddard. The Legislature also held four special sessions.

Regular Session. In the regular session, legislation included the passage of a public accommodations law and the establishment of a civil rights commission. Compulsory annual automobile inspections were repealed, and the gasoline tax was increased by 1 cent a gallon, to a total of 7 cents.

In other legislative action, $466,000 was appropriated to implement the federal Kerr-Mills medical care program; the deadline for the statewide tax reappraisal program was extended to 1967; and a three-member board was created to administer state applications of the Federal Land and Water Conservation Fund Act.

Special Sessions. Three of the four special sessions resulted from the failure of the Legislature to enact Governor Goddard's school-equalization and capital-financing programs. Agreement between the Legislature and the governor was deadlocked through the first two special sessions, but in the third the Legislature passed a compromise school-equalization bill and referred to the voters a proposed constitutional amendment raising the state debt limit from $350,000 to $100 million. The amendment was soundly defeated at the polls in October by a margin of 4½ to 1, but the voters did approve a bond issue of $33 million for city and school improvements in the Tucson area.

The fourth special session dealt with congressional redistricting and state legislative reapportionment. The Legislature failed to reach agreement on redistricting Arizona's three congressional seats, but did agree to reapportion the state Senate, increasing its membership from 28 to 31.

Economy and Business. While the state's economy during the first half of 1965 operated at lower levels than in 1964 (particularly in Tucson), it improved in the last quarter. The Anaconda Copper Company announced plans to spend $65 million over a five-year period on copper development in the Tucson area. The state continued to lead the nation in copper production.

Tucson's morning *Arizona Daily Star* was sold to the evening *Daily Citizen* for $10 million, thus placing both of the city's daily newspapers under single ownership.

Crime. Tucson was rocked during the year by a series of alleged murders, notably that of Zenith Radio Corporation heir Eugene (Stormy) McDonald III and of three teenage girls. The McDonald death later was ruled a suicide. Of three suspects in the

ARIZONA · Information Highlights

Area: 113,909 square miles.

Population: 1,635,000 (1965 est.).

Chief Cities (1965 est.): Phoenix, the capital (520,000); Tucson (245,000); Mesa (49,000); Tempe (45,000); Scottsdale (44,000); Glendale (31,000); Yuma (26,500); Flagstaff (22,000).

Government: *Chief Officers*—governor, Samuel Pearson Goddard (Democrat); secy. of state, Wesley Bolin (D); atty. gen., Darrell F. Smith (Republican); treas., Bob Kennedy (D); supt. of pub. instr., Sarah Folsom (R); chief justice, Lorna E. Lockwood. *Legislature* (convened Jan. 11, 1965); Senate, 28 members (26 Democrats, 2 Republicans); House, 80 members (45 D, 35 R).

Education: *School enrollment* (1964–65)—public elementary, 299,800 pupils (11,124 teachers); public secondary, 105,475 pupils (4,420 teachers); nonpublic schools, 36,200 pupils (1,100 teachers); college and university (fall 1964), 61,834 students. *Public school expenditures* (1964–65)—$159,000,000 ($451 per pupil); average teacher's salary, $6,670.

Public Finance (fiscal year 1965): *Revenues*, $304,584,499 (3% sales tax, $23,888,297; motor fuel tax, $23,124,110; federal funds, $48,817,568). *Expenditures*, $294,246,377 (education, $121,667,381; health, welfare, and safety, $47,618,063; roads and highways, $97,616,421).

Personal Income (1964): $3,530,000,000; average annual income per person, $2,233.

Public Assistance (fiscal year 1965): $29,012,806 to 59,615 recipients (aged, $10,131,146; dependent children, $13,912,426).

Labor Force (employed persons, July 15, 1965): *Agricultural*, 34,600; *nonagricultural* (wage and salary earners), 462,400 (16% manufacturing, 24% trade, 22% government). *Unemployed persons*—30,900.

Manufacturing (1963): Value added by manufacture, $617,413,000 (primary metals, $94,026,000; nonelectrical machinery, $51,680,000; electrical machinery, $86,533,000; fabricated metals, $22,896,000; food and products, $76,196,000).

Agriculture (1964): *Cash farm income*, $451,397,000 (livestock, $163,662,000; crops, $282,581,000; govt. payments, $5,154,000). *Chief crops* (tons)—cottonseed, 349,000 (ranks 6th among the states); barley, 290,000 (rank, 9th); sorghum grain, 234,000 (rank, 8th); citrus fruits, 221,000 (rank, 3rd); potatoes, 98,000 (rank, 20th); grapes, 12,500 (rank, 7th); hay, 1,027,000; corn for grain, 13,000; wheat, 48,500; oats, 4,800.

Mining (1964): *Production value*, $534,364,000 (ranks 10th among the states). *Chief minerals* (tons)—copper, 690,988 (ranks 1st among the states); lime, 177,000 (rank, 11th); uranium ore, 102,258 (rank, 7th); zinc, 24,690 (rank, 11th); silver, 5,811,000 troy ounces (rank, 2nd); gold, 153,676 troy ounces (rank, 3rd); iron ore, 4,500 (rank, 14th); lead, 6,147 (rank, 5th).

Transportation: *Roads* (1965), 39,065 miles (18,338 surfaced); *motor vehicles* (1964), 907,730; *railroads* (1963), 2,077 miles; *aircraft* (1964), 2,439 (156 airports).

Communications (1965): *Telephones*, 604,300; *television stations*, 10; *radio stations*, 56; *newspapers* (1964), 13 (daily circulation, 400,000).

latter case, two were tried and convicted, while the third awaited trial at the end of the year. Superior Court Judge Richard Roylston again enjoined police and prosecuting officers from talking about the triple-murder case to press representatives. His order aroused nationwide interest as to whether the freedom of the press was being infringed in this instance.

Floods. At the year's end, record rain and snowfall throughout the state caused severe floods in Phoenix and Tucson. Property damage, amounting to millions of dollars in both cities, was most extensive in Phoenix.

Power Failure. In November a power failure occurred in the Phoenix area of the Salt River Power District, resulting in a four- to five-hour blackout.

DAVID A. BINGHAM
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ARKANSAS

The General Assembly met four times in 1965 and took action in nearly every major area of the state's affairs. In the midst of its regular session, the Assembly was ordered by a federal court to redraw the state's four congressional districts. Its decision not to attempt that task during the 60-day session made special sessions necessary.

Legislative Sessions. The first special session, held May 24 to June 8, equalized the congressional districts and also enacted a pay-as-you-go road program. The latter replaced a $150 million highway bond proposal which had been submitted to voters by the regular session and defeated.

A second special session was called by Gov. Orval E. Faubus on November 2 to take action to discourage new race tracks in Arkansas and to consider 21 other stated items. The legislators passed bills on the racing issue and all but one of Faubus' other proposals. However, the House declined to adjourn without authorizing the payment of 1965 state income taxes in two installments. The session adjourned on November 4 after the governor compromised on the tax relief question by calling a third special session to consider that issue only.

The final session was held on November 6 and lasted only 30 minutes, during which it voted to permit installment payment of the 1965 income taxes.

Taxation. Legislators raised the tax on cigarettes from 6 to 8 cents per pack, and on horse- and dog-race betting, from 5 to 6%. To finance the pay-as-you-go road-building program, the legislature raised the gasoline tax by 1 cent and the diesel fuel tax by 2 cents, and increased license fees for most vehicles.

Some loopholes were closed in the state's use tax, and a state income tax withholding program was created, effective Jan. 1, 1966. The withholding provisions were planned to produce a large amount of revenue through concurrent collections on both 1965 and 1966 incomes. A measure also was passed that requires banks holding state funds on time deposit to pay interest.

Reapportionment. Early in the year a federal court ordered both the equalization of congressional districts by population and the reapportionment of the General Assembly. The Assembly carried out the first task, and later was redistricted by the State Board of Apportionment. The changes in the Assembly affected the House more than the Senate because the practice of assigning one representative to each county was abandoned.

Voter Registration. Legislators passed an enabling bill which required county voter registration clerks to establish Arkansas' first permanent, free, and nondiscriminatory registration system. Registration appeared to be near completion at year's end, and there were no published reports of attempted discrimination.

Education. The legislature voted funds to help raise Arkansas teachers' pay by an average of about $1,000 per year, to open seven more vocational technical schools, and to begin educational television.

A junior college enabling bill also was enacted. Later in the year, Phillips County voters approved a tax increase to help launch the state's first county junior college.

Sports. The University of Arkansas Razorbacks were undefeated in 1965 for the second successive football season. Their 22 consecutive victories set a new record for a Southwest Conference team.

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Southern State College

ARKANSAS · Information Highlights

Area: 53,104 square miles.
Population: 1,889,000 (1965 est.).
Chief Cities (1965 est.): Little Rock, the capital (130,500); Fort Smith (64,500); North Little Rock (62,500); Pine Bluff (57,000); Hot Springs (29,500); Blytheville (26,500); El Dorado (25,600); Jonesboro (24,800).
Government: *Chief Officers*—governor, Orval E. Faubus (Democrat); lt. gov., Nathan Gordon (D); secy. of state, Kelly Bryant (D); atty. gen., Bruce Bennett (D); treas., Nancy J. Hall; comm. of pub. instr., Arch W. Ford; chief justice, Carleton Harris. *Legislature*—General Assembly (convened Jan. 11, 1965); Senate, 35 members (all Democrats); House of Representatives, 100 members (99 D, 1 R).
Education: *School enrollment* (1964–65)—public elementary, 256,998 pupils (9,262 teachers); public secondary, 199,482 pupils (7,545 teachers); nonpublic schools, 14,000 pupils (530 teachers); college and university (fall 1964), 36,196 students. *Public school expenditures* (1964–65)—$129,693,000 ($317 per pupil); average teacher's salary, $4,200.
Public Finance (fiscal year 1965): *Revenues*, $374,883,100 (3% sales tax, $70,353,267; motor fuel tax, $50,183,386; federal funds, $105,659,047). *Expenditures*, $360,338,910 (education, $79,007,542; health, welfare, and safety, $84,725,905; highways, $90,619,894). *State debt*, $43,063,000 (June 30, 1965).
Personal Income (1964): $3,200,000,000; average annual income per person, $1,655.
Public Assistance (fiscal year 1965): $47,737,077 to 101,197 recipients (aged, $36,364,689; dependent children, $5,483,454).
Labor Force (employed persons, mid-July 1965): *Agricultural*, 74,300; *nonagricultural* (wage and salary earners), 577,700 (23% manufacturing, 61% trade, 15% government). *Unemployed persons* (mid-July 1965)—21,900.
Manufacturing (1963): Value added by manufacture, $958,687,000 (transportation equipment, $15,714,000; primary metals, $37,665,000; nonelectrical machinery, $35,526,000; electrical machinery, $72,655,000; fabricated metals, $34,419,000; food and products, $149,642,000).
Agriculture (1964): *Cash farm income*, $878,684,000 (livestock, $320,900,000; crops, $542,884,000; govt. payments, $14,900,000). *Chief crops* (tons)—rice, 924,500 (ranks 2nd among the states); cottonseed, 654,000 (rank, 4th); wheat, 427,200 (rank, 19th); peaches, 26,400 (rank, 8th); sweet potatoes, 11,100 (rank, 11th); hay, 788,000; alfalfa, 106,000.
Mining (1964): *Production value*, $174,789,000 (ranks 26th among the states). *Chief minerals* (tons)—bauxite, 1,749,422 (rank, 1st); barite, 233,455 (rank, 2nd); lime, 189,000 (rank, 10th); petroleum, 26,737,000 barrels (rank, 13th); natural gas, 76,167,000,000 cubic feet (rank, 14th); stone, 20,241,000.
Transportation: *Roads* (1965), 80,296 miles (15,904 paved); *motor vehicles* (1964), 875,887; *railroads* (1964), 5,903 miles; *airlines* (1965), 6 (96 airports).
Communications (1965): *Telephones*, 577,800; *television stations*, 7; *radio stations*, 89; *newspapers*, 30 (daily circulation, 570,156).

ARMED FORCES. See AIR FORCE; ARMY; MARINE CORPS; NATIONAL GUARD; NATIONAL DEFENSE; NAVY.

U.S. ARMY HELICOPTER unloads troops on the Con River in November during the 1st Cavalry Division's first major campaign in Vietnam. Chinook helicopter carries greatest troop load of any helicopter now in use.

UPI

ARMY

The U.S. Army expanded in troop strength and operational units in 1965 as, together with other branches of the country's military forces, it engaged in direct combat in support of South Vietnam's bloody struggle against Communist insurgency. War requirements rendered academic such long-standing questions as whether the Army should have at least a million men, as so many of its experts believed; whether it should have another division, as its top leaders had long sought; and whether one of its divisions should have air mobility by being equipped with a large complement of helicopters. All of these objectives were realized in 1965.

Strength. The Army began the year with an authorized strength of about 961,000 officers and men. Its strength at the end of the year was authorized at 953,094. The reduction was due to the fact that a number of Army installations were closed.

As the U.S. commitment in Vietnam grew, however, an increase of 235,000 in Army personnel was authorized. In September, draft calls were increased substantially. In October the training of certain Army National Guard and Reserve units was intensified, indicating their possible mobilization. At the end of the year the Army was building toward a strength of 1,188,094 men, including the formation of the recommended 17th division.

Vietnam. The Army bore the principal American burden in Vietnam. Its contributions were threefold: (1) logistical, including armed helicopter support for South Vietnamese combat units, and building and providing matériel for supply depots, airfields, and a major new port; (2) advisory, with officers and men accompanying South Vietnamese combat units in the field, including Special Forces teams with South Vietnamese local defense forces in remote areas; and (3) direct combat.

The Army committed part or all of some of its most famous outfits to the war. These included the 173d Airborne Brigade, the 1st "Big Red One" Infantry Division, the 101st "Screaming Eagles" Airborne Division, and the new 1st Cavalry Division (Airmobile).

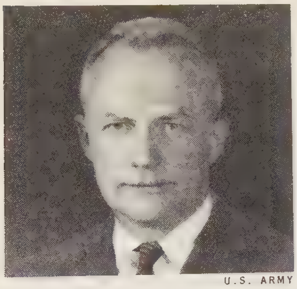
While the Vietcong continued their ambush and terrorist tactics in South Vietnam, the challenge of powerful Army units supported by aerial bombings apparently caused the enemy to reduce large-scale attacks and to revert to earlier small-scale guerrilla raids. (The U.S. Marines experienced a similar tactical change in their sector.)

Deployments. In addition to the more than 75,000 men in Vietnam by October 1965, the Army also had sizable commitments in other places outside the continental United States. There were more than 250,000 Army men in Europe, and more than 90,000 in the Pacific and Far East, including 40,000 in Korea. In April and May, during the civil war in the Dominican Republic, the Army had its entire 82d Airborne Division of 14,800 men in that country. After an Inter-American Peace Force was established, the United States reduced the size of its force.

Combat Readiness. During the year, the Army continued to address itself to the problems of both nuclear and conventional warfare, although in Vietnam

ARMY TROOPS of the 1st Cavalry Division, the first airmobile unit, prepare to debark at Qui Nhon, South Vietnam, in July. Helicopters are used to transport troops during their attacks on Vietcong guerrilla bases.

UPI



U.S. ARMY

STANLEY ROGERS RESOR was sworn in as secretary of the Army on July 7, 1965, succeeding Stephen Ailes. He had served as undersecretary of the Army from April 5, 1965, after active service in the Army during World War II and a distinguished career as a lawyer. As secretary of the Army he immediately took steps to meet the needs of the escalating war in Vietnam.

Resor was born in New York, N.Y., on Dec. 5, 1917. His father was Stanley Resor, an outstanding figure in the world of advertising. He graduated from Yale and received a law degree there. During World War II he saw active service in France, Belgium, and Germany, rising from 2nd lieutenant to major and winning the Silver and Bronze Stars as an artillery officer in the Battle of the Bulge. After the war he returned to legal practice with the firm of Debevoise, Plimpton, Lyons and Gates in New York City, where he remained until his appointment as undersecretary of the Army.

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it had to cope with a type of insurgency that more often required police tactics than regular military techniques. No major new weapons deployments were carried out in 1965 comparable to the installation of 200-mile-range Pershing missiles in Europe the year before. The M-113 personnel carrier and the new M-60 were fairly well distributed throughout the Army.

The outstanding development in Army combat readiness in 1965 was in aviation. During the year the number of Army aviators increased from 8,276 to 9,074, and by the end of the year the Army had more than 7,000 aircraft (including those assigned to the Reserves), of which some 2,300 were deployed in Vietnam. The January budget authorized the purchase of 1,018 new aircraft, mostly helicopters, but at midyear an increase of 60 percent was authorized in the rate of UH-1 Iroquois helicopter production, and of 100 percent in the rate of CH-47 Chinook helicopter production. The Army increased its separate helicopter companies by more than 50 percent.

The Army was authorized in June to organize an experimental airmobile division—the 1st Cavalry—which received speedy orders to go to Vietnam. The new airmobile division had 434 aircraft (428 helicopters and 6 fixed-wing aircraft), compared with 101 aircraft (97 helicopters and 4 fixed-wing) in the Reorganization Objective Army Division (ROAD). With this number of aircraft, one third of the 1st Cavalry could be airlifted at one time, and the remainder could be transported by shuttling the aircraft back and forth or by making use of other Army and Air Force support planes. One brigade of the division had a parachute-jump capability.

The new airmobile division improves the balance between firepower and maneuverability. This balance was upset by significant increases in firepower after World War II, but by using helicopters to deliver men and weapons, as in the operations in Vietnam, the division can exploit surprise and swift reaction tactics. The vertical entry of units to the battlefield, and their withdrawal the same way, makes it possible to recycle combat forces, placing the Army on the threshold of an entirely new approach to the conduct of land battle.

Shortages. A dispute developed in August and September between the Senate Preparedness Subcommittee and President Johnson's administration over reported shortages in supplies available for the war in Vietnam. A staff study by the Senate unit indicated that potential shortages existed in a wide range of items. There were reports that combat units in Europe, particularly the 7th Army, were being "starved" because supplies had been diverted to Vietnam. Secretary of Defense Robert S. McNamara denied the allegations, however.

Research and Development. The Army continued to develop the Nike-X antimissile missile. In September it awarded a large contract to the Western Electric Company for continuing certain aspects of the development, in the hope that enough progress could be achieved to warrant a decision to install the antimissile missile system as a defense against long-range ballistic missiles.

Work continued on a design for a special-purpose individual weapon (SPIW) which will combine the point-target capabilities of a conventional rifle with the area-target capability of the 40-millimeter grenade launcher. The Lance missile system to replace the Honest John free rocket also underwent further development, and an advanced aerial fire support system was conceived as an aerial-weapons platform to supplant existing armed helicopters. In addition, the Army was developing a new family of tactical radios for long-, medium-, and short-range use.

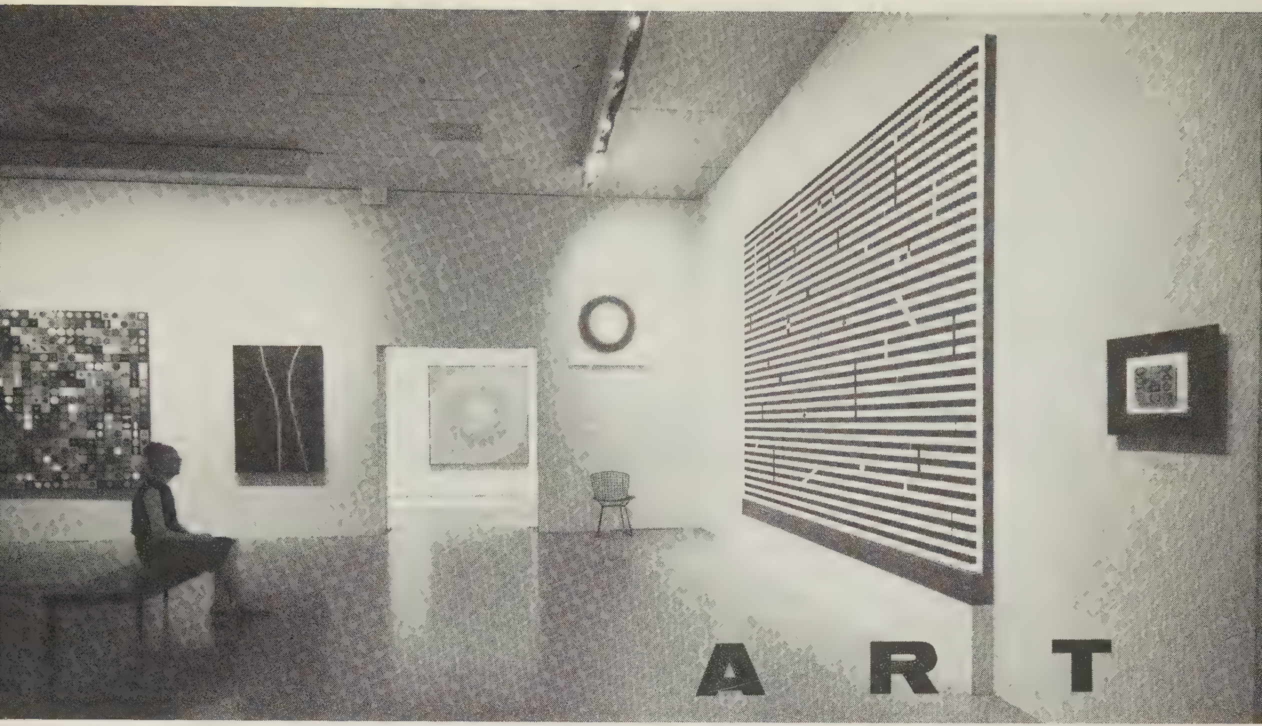
Reserves. The administration sought in 1965 to carry out a merger of Army Reserve units with the National Guard. Under the plan, the authorized drill-paid strength of 700,000 in the reserve forces (400,000 in the National Guard, and 300,000 in the Army Reserves) would be reduced to 550,000. The plan met with opposition in Congress and from the Reserve units themselves. Congress, in its defense appropriations bill for the fiscal year beginning July 1, 1965, finally barred an outright merger.

Thereupon, the secretary of defense ordered the dissolution of a sizable portion of the Army Reserve units and designated three National Guard divisions and six National Guard brigades, along with a handful of Army Reserve units, as a special priority force to receive intensified training. The effect was to accomplish most of the original objectives of the merger plan. In deference to Congress, the secretary of defense said he would program the 700,000-man Army Reserve Forces as originally authorized, but he doubted whether the strength of the Army Reserves could be maintained.

The Army Reserves, although officially programmed for 300,000, had a year-end strength of 261,654 after the ordered dissolution of some 751 Reserve units. About 50,000 men were given the choice of transferring to the National Guard or being placed in a Reserve pool.

Administration. Stanley R. Resor became secretary of the Army on July 7, 1965 (see the accompanying biographical sketch). David E. McGiffert became undersecretary of the Army in September. Gen. Harold K. Johnson continued as chief of staff of the Army, and Gen. Creighton W. Abrams remained as vice chief.

JACK RAYMOND
Pentagon Correspondent, "The New York Times"



GEORGE CSERNA

"THE RESPONSIVE EYE," an exhibit of "optical" art at the Museum of Modern Art in New York, was one of the most influential shows of 1965.

ART

Public attention shifted in 1965 from "pop" to "op" art. Op (for optical) art chooses as its subject matter perceptual processes. It is completely abstract and arouses interest purely by dynamic color interaction and optical illusion. Unlike pop art, with its disquieting use of sometimes frivolous, sometimes sinister commonplace images, optical art seemed reassuringly earnest and joyous.

The kinship of optical art to scientific studies of perception gave it a respectable seriousness. In fact, some scientists were included among the exhibitors. But the scientific aspects of optical art should not be overemphasized. Its bright colors and bold patterns create a carnival-like atmosphere. Although fashion designers and publicity men were quick to exploit the novelty of optical art, it is no sudden fad. Its major exponents, Josef Albers, aged 77, and Victor Vasarely, aged 57, have been working in this mode for many years.

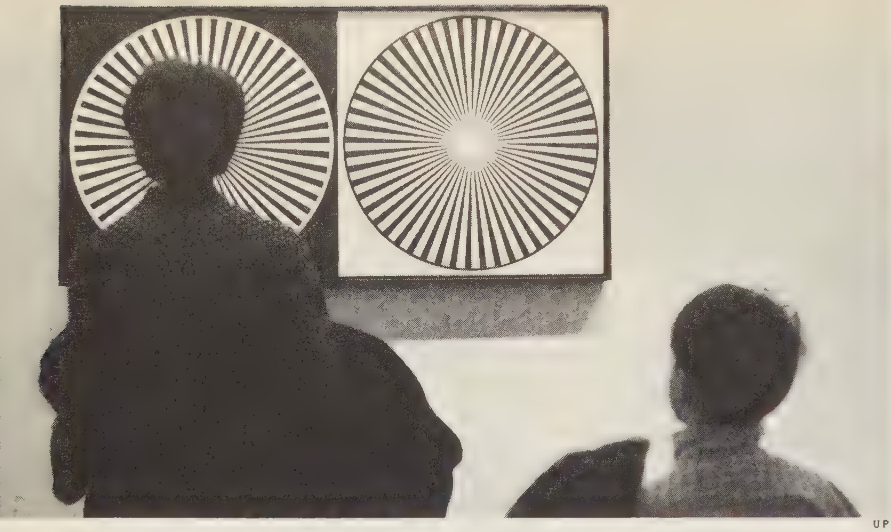
Perhaps more than painting, though, sculpture in all styles challenged the sensibilities of viewers in 1965. Over the past decade, sculpture has experienced a renaissance unprecedented since the 15th and 16th centuries. In New York a stabile by Alexander Calder and a large bronze sculpture by Henry Moore were dedicated at Lincoln Center for the Performing Arts. In St. Louis a 630-foot concrete and steel arch designed by the late Eero Saarinen became the civic symbol. New sculpture in the galleries included tableaux by Edward Kienholz and George Segal; cloth sculpture by Joseph Kurhajec, Claes Oldenburg, and Richard Lindner; strange boxes by Donald Judd, Larry Bell, and Robert Morris; and kinetic constructions by Len Lye.

Festival of the Arts. Throughout the United States, contemporary art continued to assume an increasingly important role in public life without losing its avant-garde experimentalism. Of special importance to American artists was the White House Festival of the Arts on June 14. The festival signaled a new federal involvement in culture. A National Council on the Arts was formed, and a comprehensive exhibition of modern painting and sculpture was shown at the White House. President Johnson also signed a bill establishing a National Foundation on the Arts and Humanities, authorized to spend $21,000,000 a year to encourage the arts.

Exhibitions. More than 20 important shows in the 1965 season featured optical art. The most significant was "The Responsive Eye," which opened at the Museum of Modern Art, New York, and then traveled to St. Louis, Seattle, Pasadena, and Baltimore. Other shows included: "Washington Color Painters," at the Washington Gallery of Modern Art, Washington, D.C.; "Arte Programmata," which, in a nationwide tour, featured kinetic art from Italy; and, in New York, "Color Dynamism, Then and Now," at the East Hampton Gallery; "Vibrations," at Martha Jackson; "Impact," at Greer; and "Groupe de Recherche d'Art Visuel," at Contemporaries.

Optical art was also seen in New York one-man shows by Leon Polk Smith, Larry Poons, Gene Davis, Piero Dorazio, Bridget Riley, Reginald Neal, Ellsworth Kelly, John Goodyear, Richards Anuszkiewicz, Ad Reinhardt, and Kenneth Noland. At the Wise Gallery, works by two communications experts, Bela Julesz and Michael Noll, were executed by a digital computer and a microfilm plotter.

Sculpture exhibits in New York stressed experiments and innovations that ranged from color-and-motion studies to almost irreducibly simple objects. Electric lighting was used in the work of Martial



UPI

OPTICAL ILLUSIONS gave effect of whirling or pulsating motion to many "op" works. This "op" painting was in the Museum of Modern Art exhibit.

Raysse, at the Iolas Gallery; Don Flaven, at the Green Gallery; and Michael Steiner, at the Fischbach Gallery. Charles Hinman, in his first one-man show, displayed stretched canvas wall constructions at the Feigen Gallery. The Byron Gallery featured a "Box Show," and Carl André filled the De Nagy Gallery with styrofoam slabs. Some of the other important sculpture exhibitions at New York galleries were: Ernest Trova (Pace), Joseph Cornell (Stone), Richard Stankiewicz (Stable), Rudolf Hoflehner (Odyssia), Isamu Noguchi (Cordier-Ekstrom), Seymour Lipton (Marlborough), Reuben Nakian (Egan), Robert Hudson (Frumkin), Arnaldo Pomodoro (Marlborough), Joseph Goto (Radich), and Frank Gallo (Graham). The major sculpture retrospective of the year displayed the work of Alberto Giacometti at the Museum of Modern Art.

Several outstanding exhibitions of so-called old masters of avant-garde painting were held in New York: Marcel Duchamp and Man Ray (Cordier-Ekstrom), Fernand Léger (Chalette and Rosenberg galleries), Kurt Schwitters (Marlborough), Gustav Klimt and Egon Schiele (Guggenheim), Alexander Jawlensky (Hutton), and Joaquín Torres-García (Fried). American synchromist paintings by Patrick Henry Bruce, Andrew Dasberg, Stanton Macdonald-Wright, and Morgan Russel were shown at the Knoedler Gallery.

A particularly powerful exhibit was the Edvard Munch show mounted by the Guggenheim. Over 120 of Munch's paintings, drawings, and prints were exhibited: Many were from Scandinavian collections, and had never before been seen in the United States. This exhibit and a revival of the work of the Swedish painter Ernst Josephson (1851–1906), at the Huntington Hartford Gallery of Modern Art in New York, indicated a continuing interest in expressionism.

Various forms of realism also were represented by New York shows. The work of William Merrit Chase was exhibited at the Gallery of Modern Art; "Robert Henri and His Circle," at the American Academy of Arts and Letters; "George Luks and Contemporaries," at Chapellier; Reginald Marsh, at the Gallery of Modern Art; Camille Pissarro, at Wildenstein; an Ivan Albright retrospective, at the Whitney; and modern portraiture, at the New School.

Other interesting exhibitions in New York galleries included: Willem de Kooning (Stone), Robert Diebenkorn (Jewish Museum), Pierre Soulages (Kootz), William Baziotes (Guggenheim), R.B. Kitaj (Marlborough), Grace Hartigan (Jackson), Ben Nicholson (Marlborough), Joan Mitchell (Stable), Helen Frankenthaler (Emmerich), Alfred Jensen (Graham), Jules Olitski (Poindexter), Lee Gatch (Staempfli), Wayne Thibaud (Stone), Robert Motherwell (Museum of Modern Art), Stuart Davis (Whitney), and Larry Rivers (Jewish Museum). The Rivers show, which opened at Brandeis University in the spring and then traveled, added his "Russian Revolution," a 30-foot-long assemblage, for the New York opening. One of the most extensive surveys of American painting to date at the Metropolitan Museum displayed almost 500 works from the 1700's to the present.

Large surveys of modern art were mounted throughout the nation. In the University of Illinois' "Biennial of Contemporary American Painting and Sculpture," abstractions outnumbered representational works two to one. In "Art Today," at the Albright-Knox Gallery in Buffalo, N.Y., one half of the space was devoted to "machines" using various combinations of lights, motion, and sound. The Los Angeles County Museum presented "New York School, The First Generation," which included 122 important works painted during the 1940's and 1950's by William Baziotes, Willem De Kooning, Arshille Gorky, Adolph Gottlieb, Phillip Guston, Hans Hofmann, Franz Kline, Robert Motherwell, Barnett Newman, Jackson Pollock, Richard Pousette-Dart, Ad Reinhardt, Mark Rothko, Clyfford Still, and Bradley Walker Tomlin. Brown University mounted an exhibit in two parts devoted to postwar painting and sculpture. Contemporary English artists, such as Bridget Riley, David Hockney, Peter Blake, and Allen Jones, were featured in the Washington Gallery of Modern Art show, "London: the New Scene." Of special interest was a relatively small exhibit of 100 contemporary American drawings at the University of Michigan Museum of Art.

As in the recent past, the major shows of old masters during the year were seen outside New York City, although Finch College (in New York) displayed a distinguished group of Genoese painters ranging from Cambiaso to Magnasco. The Detroit Museum of Art mounted one of the most important exhibits of the season—"Art of Italy, 1600–1700." The Herron Art Institute, Indianapolis, presented "The Romantic Era, Birth and Flowering," and the Newark Museum showed "The Golden Age of Spanish Still Life Painting." John Singleton Copley and Hendrick Terbrugghen were featured in important exhibitions at the National Gallery, Washington, D.C., and the Museum of Art, Dayton, Ohio, respectively.

Noteworthy New York exhibits of non-Western art included: a loan exhibition of sculpture from 22 Indian museums, at the Metropolitan; the Singer Collection of early Chinese art, at Asia House; and "Masterpieces of the South Seas," at the Museum of Primitive Art. A traveling show, "Treasures from Japan," opened at the Los Angeles County Museum.

Among controversial showings were several New York exhibits of erotic art. They included "Sex and Violence," a protest show by artist William Kent at the Castellane Gallery, and "Contemporary Erotica," at the Van Bovencamp Gallery.

Museums. The most important museum news of 1965 was the opening of the new Los Angeles County Museum, designed by William L. Pereira, and the renovation and air-conditioning of 43 galleries at the Metropolitan Museum of Art, New York. The Metropolitan also installed the Thomas J. Watson Library, which has 155,000 volumes, reading rooms, and numerous private study alcoves.

At the Sterling and Francine Clark Art Institute, Williamstown, Mass., rare drawings from the Clark collection were displayed publicly for the first time. The institute also purchased the art library of Duveen Brothers, 12,000 volumes valued at $700,000. The Cincinnati Art Museum completed a $3,000,000 improvement program. In San Diego the Timken Art Gallery opened with old masters from the Putnam Foundation.

The National Gallery, Washington, D.C., placed on exhibit for the first time all 240 paintings of the Chester Dale collection. Seventy-five works from the Thannhauser collection, which was bequeathed to the Guggenheim Museum, New York, were installed in newly constructed galleries. An important group of paintings and prints by Grant Wood were acquired by the Municipal Art Gallery, Davenport, Iowa, making it the principal owner of Wood's work. A distinguished collection of ancient Chinese bronzes, owned by Chester Dale Carter, went to the Princeton University Art Museum. The Avery Brundage collection of Asian art was presented to the M.H. DeYoung Memorial Museum, San Francisco. Some of the other major museum acquisitions in the United States were: Jawlensky's *Helene with Red Turban* (Guggenheim); David's *Count Étienne Gérard* (Metropolitan Museum); Toulouse-Lautrec's early work, *Au Cirque: dans les Coulisses* (Newark Museum); a complete retrospective exhibition of the kinetic sculpture of Jean Tinguely (Museum of Fine Arts, Houston); and Louise Nevelson's monumental sculpture, *Homage Six Million* (Jewish Museum, New York).

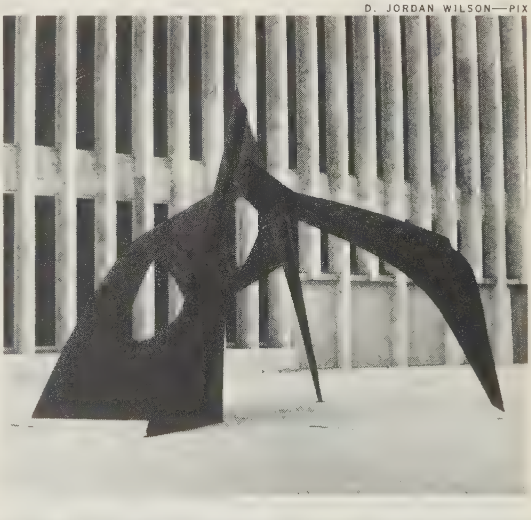
Museum involvement in the constantly increasing tempo of creation and exhibition has raised the question of whether a museum's primary function is to display and preserve recognized masterpieces, propagate new ideas, or objectively mirror current activity in the arts. An example of museum involvement is a project undertaken in 1965 by leaders of American Reform Judaism, who started a campaign to raise $2,000,000 for a religious art center in New York. The primary purpose of the center will be to initiate artistic projects dealing with Jewish religious and cultural themes.

Art Thefts and Vandalism. Goya's portrait of the Duke of Wellington, stolen from the National Gallery in London in 1961, was returned on May 22, 1965. The unknown thief, after sending gallery officials a series of unsuccessful ransom notes, deposited the painting in a railway baggage office and forwarded the receipt to gallery officials.

Several Vatican treasures, including manuscripts by Francesco Petrarch and Torquato Tasso, were stolen from the Vatican Museum on November 26 and recovered the following day. The thieves threw the loot, carefully wrapped, from a speeding car into the shrubbery of a villa on the outskirts of Rome.

More serious than thefts, however, is the rising

D. JORDAN WILSON—PIX



SCULPTURE AT LINCOLN CENTER in New York City includes two pieces installed in 1965—Alexander Calder's steel *Ticket Window* (right) and Henry Moore's bronze *Reclining Figure* (below) in front of Vivian Beaumont Theatre.

D. JORDAN WILSON—PIX

incidence of vandalism in museums all over the world. During 1965 no less than 23 paintings were seriously disfigured in the Uffizi Gallery, Florence. Figures in the paintings had their eyes gouged out and faces slashed. At the Corcoran Gallery, Washington, D.C., nine large canvases were damaged. The vandals attacked both old and new paintings, including works by the 19th century landscapist Albert Bierstadt and the contemporary "combine painter" Robert Rauschenberg.

More and more museums are installing special safety devices in order to protect their treasures. For the past several years the Cleveland Museum has had its galleries under television surveillance.

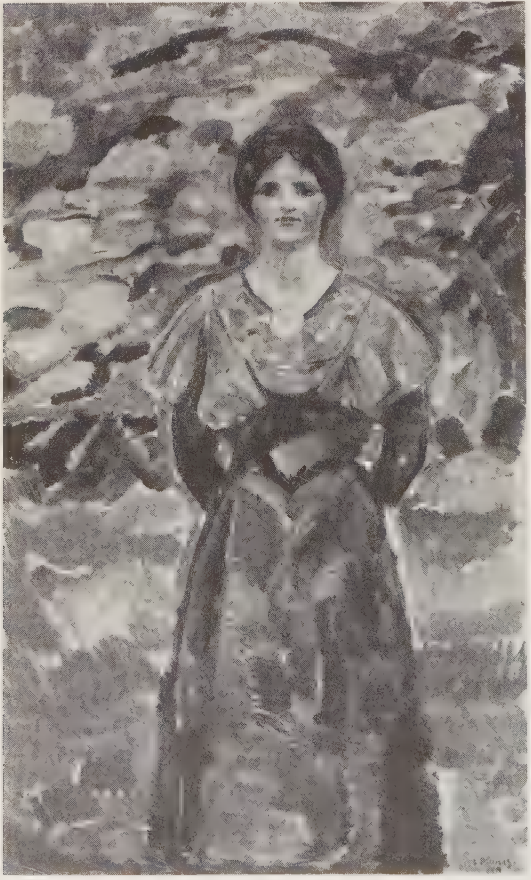
Sales. The American industrialist Norton Simon created an uproar at Christie's, the London auction house, when he obtained a Rembrandt portrait of the artist's son Titus with a near-record bid of $2,234,000. The auctioneer had closed the bidding, but Mr. Simon, contending there was an irregularity, had the bidding reopened and won the portrait.

Mr. Simon was less successful, however, in his attempt to buy Leonardo da Vinci's *Portrait of a Young Woman* from the collection of Prince Franz Josef II of Liechtenstein. It was reported that he offered $6,000,000 for the Leonardo—the highest bid for a painting ever recorded—but the prince, whose collection of old masters is considered the most valuable still in private hands, refused to sell.

The most controversial sale of the year involved a "Renaissance" bust purchased by the Metropolitan Museum for $225 at Parke-Bernet. Museum experts claimed that the work may have been modeled by Leonardo da Vinci. The bust's former owner, H. Hamilton Rice, had paid $200,000 for it. Impressionists, postimpressionists, and moderns dominated the scene at two major Parke-Bernet auctions in April and October. Several world records were set at the April sale. A private collector purchased Cézanne's *House at L'Estaque* for $800,000, breaking all auction records for a modern painting. Degas' *Ballet Rehearsal* was sold for $410,000, and Bonnard's *Tall Mirror* brought $155,000. Total sales were $3,385,600—the largest amount ever realized at an auction of post-1870 canvases.

EDVARD MUNCH exhibition at the Guggenheim Museum included *The Artist's Model,* and over 120 other works.

MUSEUM OF FINE ARTS, BOSTON



The value of abstract expressionists paintings, mainly from the Robert Scull collection, was tested at an auction in New York. The top price of $37,000 was paid for De Kooning's 1955 *Police Gazette.* Works by Clyfford Still, Barnett Newman, and Robert Rauschenberg went for $29,000, $26,000, and $20,000, respectively.

Sotheby and Co., London, reported a record turnover of $47,651,870 for the season. The demand for impressionists and postimpressionists remained insatiable. There was also a consistent interest in abstract expressionists.

Awards, Honors, and Grants. At the invitation of the U.S. Information Agency, Walter Hopps, director of the Pasadena Art Museum, selected the United States section of the 8th São Paulo Biennál, in which 50 nations participated. The seven artists chosen to represent the United States were Barnett Newman, Robert Irwin, Frank Stella, Larry Bell, Donald Judd, Larry Poons, and Billy Al Bengston.

The John Simon Guggenheim Foundation gave fellowships to 14 painters and sculptors, including George Ortman, Lyman Kipp and Thomas Stearns. The Brandeis University Creative Arts Medal was awarded to Mark Rothko. Other Brandeis citations went to painter Kenneth Noland and art historian Alfred Barr. University of Illinois purchase awards went to James Brooks, Paul Jenkens, Erle Loran, and Salvatore Scarpitta. Recipients of Copley Foundation awards included John Altoon, Edward Kienholz, and Lucas Samaras.

Kress Foundation grants in art history were made to the University of California ($100,000 over three years to strengthen publication in the field), the Cooper Union Museum ($100,000 over four years to help preserve the institution), and, in various amounts, Columbia, Yale, Notre Dame, Miami (Ohio), Minnesota, Pennsylvania, Bryn Mawr, Howard, Tulane, and Williams. The San Francisco Foundation provided a grant to establish a major print-making center at the San Francisco Art Institute.

In the United States, several important commissions were given to sculptors. Jacques Lipchitz made a very lively statue for the University of Minnesota, and José de Rivera executed a stainless steel construction for the American Iron and Steel Institute in New York.

The American Academy of Arts announced the election of Alexander Calder as a member. Lewis Mumford was reelected president. The National Institute of Arts and Letters selected Marcel Breuer, Adolf Dehn, Naum Gabo, and Jacob Lawrence to membership. Andrew Wyeth received the institute's Gold Medal for painting.

Awards to writers on the arts were made to Ramsay MacMullen (Arthur Kingsley Porter Prize), Sydney J. Freedberg (Charles Rufus Morey Book

NEW ART MUSEUM in Los Angeles was dedicated with a fireworks display on March 30. The Los Angeles County Art Museum is largest museum of art west of the Mississippi.

WIDE WORLD

Award), and Brian O'Doherty (Mather Award). Paul Mellon, whose collection of English painting was put on view at the Royal Academy, London, in 1964, was awarded the 1965 Royal Society of Art's Benjamin Franklin Medal for his contribution to Anglo-American understanding. (See also PRIZES AND AWARDS.)

Obituaries. Important artists and scholars of art who died in 1965 included: Milton Avery, 72, American landscape painter; Alan Burroughs, 67, a pioneer in the analysis of art by X-ray; Le Corbusier (Charles Édouard Jeanneret-Gris), 77, one of the major modern architects; Burgoyne Diller, 59, one of America's most eminent geometric abstractionists; Alfred Frankfurter, 59, scholar and editor-president of *Art News;* Paul Sachs, 86, connoisseur, art historian, and educator; Charles Sheeler, 82, dean of American "precisionists"; David Smith, 59, internationally renowned sculptor; and Simon Rodilla (Sam Rodia), about 90, the immigrant Italian tile setter who built the fantastic "Tower of Watts" in Los Angeles.

VICTOR H. MIESEL
Department of the History of Art
University of Michigan

ARTHRITIS

Efforts to determine the cause and prevention of the major arthritic diseases were intensified in 1965, and effective treatments of the diseases were made more readily available to the victims.

Rheumatoid Arthritis. Many researchers looked for a possible living microorganism, such as a mycoplasma (PPLO), as a causative agent in rheumatoid arthritis. Experiments indicated that the abnormal response, which is accompanied by a rise in the rheumatoid factor in the serum of a patient, might be more protective than harmful to the patient.

In 1965, indomethacin was released for general prescription. However, this new drug causes dizziness, a possibly serious side effect. Clinical use of dimethyl sulfoxide (DMSO) failed to substantiate claims of its effectiveness in treating rheumatic diseases.

Osteoarthritis. Fundamental studies on the biochemical and physical properties of cartilage indicated that concepts of osteoarthritis as a passive senile condition might be wrong. In experimental operations on the osteoarthritic hip, a change in the direction of pressure at the joint led to a regeneration of the cartilage and an apparent arresting of the disabling condition. But it will take a number of years before a complete assessment of this method of treatment can be made.

A model of the human condition of congenital hip dysplasia was studied in susceptible strains of dogs. This ailment leads directly to severe osteoarthritis in older persons.

Gout. Many studies of gout and of uric acid metabolism were carried out in 1965. One investigation pointed up a direct relationship between the acute attack of gout and the crystalline structure of uric acid. This finding gave medical workers a clearer picture of diseases which resemble gout but which are caused by other crystal deposits.

Another study discovered a new disease in children with cerebral palsy. It shows a markedly elevated serum uric acid and causes bizarre behavior.

Tests of the effects of alcohol on gout revealed that an acute attack followed the ingestion of alcohol only when the subject took the drink on an empty stomach. In this situation, the liver is forced to produce lactic acid, which inhibits the excretion of uric acid and brings on the attack.

Drugs helpful in controlling acute attacks were phenylbutazone and the new drug, indomethacin. Colchicine was still being used diagnostically and to suppress chronic attacks. Allopurinol, an enzyme inhibitor for the synthesis of uric acid, helped patients who did not respond to other therapy.

RONALD W. LAMONT-HAVERS
Associate Director for Extramural Programs
National Institute of Arthritis
and Metabolic Diseases

ASIA

UPI PHOTO BY KYOICHI SAWADA

A VIETNAMESE MOTHER AND HER CHILDREN wade across a river near Qui Nhon, South Vietnam, to escape bombs aimed at Vietcong guerrilla forces.

ASIA

International conflicts and internal strife continued to plague Asia in 1965. The war in Vietnam was accelerated, and hostilities broke out twice between India and Pakistan. During the second Indian-Pakistan clash, heavy fighting continued for a month, and sporadic fighting went on much longer. Another border war threatened to break out between India and Communist China. In the Middle East there was relative quiet, although the civil war in Yemen raged on for the first half of the year, until a compromise settlement was reached.

In addition, a number of existing political structures and governments in Asia were subjected to severe stresses. The secession of Singapore from Malaysia revealed the inherent weakness of the young federation. An abortive revolution in Indonesia led to a radical realignment of the political forces in that sprawling archipelagic state. A general election in Ceylon resulted in an abrupt change of that country's domestic and foreign policies.

Alliances and Realignment. The widening divergency in policies and attitudes between the two Communist giants—the Soviet Union and Communist China—remained a basic factor in the international relations of Asian countries. The Sino-Soviet split was marked by the tendency for North Korea and even North Vietnam to look to far off Moscow, rather than to neighboring Peking, for aid and leadership.

Meanwhile, both of the Asian alliances in which the United States has a direct interest—the South East Asia Treaty Organization (SEATO) and the Central Treaty Organization (CENTO)—were in disarray. Also, the Commonwealth of Nations was placed in an agonizing position as its members considered the internecine Indo-Pakistani conflict and the secession of Singapore from Malaysia. While many nations that were former friends and allies displayed a wary neutrality or even a new-found animosity toward each other, the two long-term antagonists, the Soviet Union and the United States, came together in an unusual combination to enforce peace between India and Pakistan.

Trends Favorable to the West. In terms of the cold war, the developments of 1965 in Asia provided the West with some grounds for optimism. There was reason to take comfort from the trends perceptible in South Vietnam. On the whole, the failure of the leftist coup in Indonesia seemed likely to be beneficial to the West. The changes resulting from the elections in Ceylon were clearly for the better from the West's point of view. Finally, although the Chinese Communists remained firmly in control of that enormous nation, they lost ground on the diplomatic front. By the end of 1965, Communist China was causing less apprehension among its opponents than it had a year earlier, and was held in less respect by its allies and associates.

FAR EAST

Vietnamese War. The war in Vietnam continued to be the focus of world concern, largely because of what it could develop into. The war involved directly only one major power—the United States. Apprehension centered on both the possibility of Communist China's direct involvement and the chance of participation by the Soviet Union. On several occasions in 1965, the increased United States commitment to the war heightened the apprehension, and much discussion took place as to whether the "escalation" of the war was not becoming uncontrollable. These apprehensions, however, turned out to be groundless. In practice, escalation proved to be a procedure that could be controlled with some degree of precision; and to each stage of the escalation, Communist China and the Soviet Union reacted with unexpected caution and restraint.

Meanwhile, the situation in Vietnam remained largely unchanged, with the same basic factors that have been at work for the past decade. The primary change was the extent of the United States commitment, which increased as a result of a number of important policy decisions. These included: (1) selective bombing of military targets in North Vietnam; (2) increasing the number of U.S. ground troops in South Vietnam; and (3) assigning U.S. troops to combat side-by-side with Vietnamese government forces.

The first and most crucial of these decisions came on Feb. 7, 1965, when United States forces commenced air attacks on Vietcong (Communist) barracks, staging areas, and supply routes in the southern region of North Vietnam. As a result, North Vietnam could no longer be used as a sanctuary from which Vietcong guerrilla operations could be staged immune from attack. Earlier, in August 1964, retaliatory action had been taken against North Vietnam after North Vietnamese torpedo boats had attacked U.S. destroyers in the Gulf of Tonkin. However, after Feb. 7, 1965, continuous strikes resulted in an altogether new phase of U.S. participation in the war. Some of these attacks on North Vietnam were made by heavy bombers based on Guam, some 2,400 miles from the target areas—a telling demonstration of U.S. air power.

Twice during 1965, the American commitment of money and troops to aid South Vietnam in its struggle against Communist attack was increased. By the end of 1965, about 180,000 U.S. troops were involved. More than 1,350 American servicemen were killed in Vietnam during 1965; 5,300 others were wounded; and 147 were captured or reported as missing. These developments showed how shallow had been the optimism of earlier prophecies that the war was being won and that U.S. troops would soon be brought home. By the same token, they justified the views of those who earlier had insisted that if an adequate number of U.S. troops was committed, the war could be won.

By mid-1965 there were signs that the tide had turned against the Vietcong. On several occasions the Vietcong risked set battles and were severely beaten. Direct U.S. military assistance and the taste of battlefield successes gave the South Vietnamese forces a renewed feeling of confidence and hope of ultimate victory. South Vietnamese leaders reminded the people that a similar attack by Communist guerrillas had been decisively defeated in Malaya a decade before.

As the war raged on, the United States stepped up its efforts to achieve a cease-fire and a permanent peace in Vietnam. A 30-hour Christmas truce was arranged for December 24–25, and, although ground fighting was resumed thereafter, the U.S. government suspended its bombing raids on North Vietnam. President Johnson initiated a major "peace offensive," sending high-level emissaries to far-flung world capitals to sound out all possibilities of arranging a negotiated settlement. However, there was no positive response from the Vietcong, North Vietnam, or their allies, and the bombing raids were resumed on Jan. 31, 1966.

South Vietnamese Government. South Vietnam's cautious optimism about the war was reinforced by a pause in the kaleidoscopic changes of government in Saigon. The young air force officer, Nguyen Cao Ky, who was named premier on June 19, came closer than any head of government since the downfall of Ngo Dinh Diem in 1963 to providing South Vietnam with a stable regime. By the end of 1965, Premier Ky had shown an interest in curbing chronic corruption and in tackling some of the basic problems of social reform. He also seemed to have some popular appeal.

President Johnson arranged a meeting with Ky in Honolulu, Hawaii, on Feb. 6–8, 1966. The Declaration of Honolulu, resulting from this meeting, stressed U.S.-South Vietnamese cooperation toward achieving civil reforms in South Vietnam as well as military victory.

Position of Communist China. The turning of the tide of war in favor of South Vietnam and its ally, the United States, had an indirect effect on the prestige of Communist China. It also seemed to give credence to the belief that withdrawal is not the way for the United States and other anti-Communist forces to "win friends" in Asia. The Chinese had often accused the United States of being a "paper tiger," but the initiative taken by the United States in the Vietnamese war in 1965, coupled with the unusually cautious reaction of China, raised interesting speculation as to who was really the paper tiger.

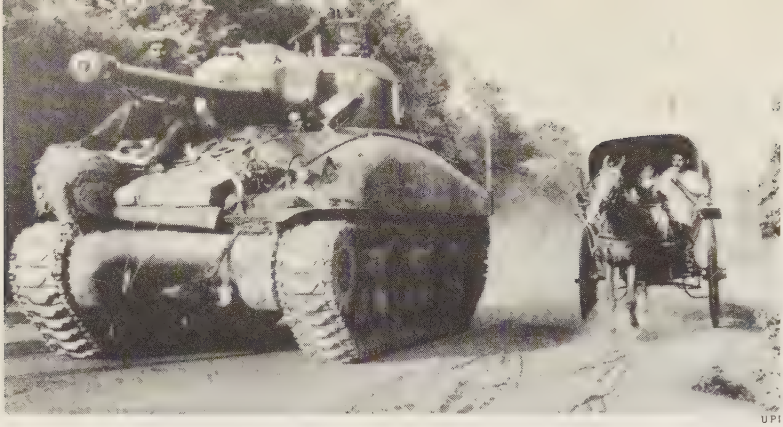
The anniversary celebration on October 1 of the establishment of the Chinese Communist government, an annual affair often used as a barometer to measure Peking's international popularity, was poorly attended in 1965. There were few delegations from Africa, and none from Japan, the Philippines, Burma, Singapore, and, inauspiciously, North Vietnam and North Korea. The latter, once Peking's most reliable Asian ally, steered an increasingly independent course in 1965. Soviet Premier Aleksei N. Kosygin visited North Korea in February, and friendly relations between Pyongyang and Moscow, broken off in 1963, were restored. Economically and militarily, North Korea began to place more reliance on distant Moscow, and to depend less on nearby Peking.

Apparently recognizing the drift of its Asian allies toward the Soviet Union, Communist China increased its ideological attacks on the USSR. On several occasions, Chinese spokesmen accused the Soviet Union of collaborating with the United States to isolate China and achieve world domination.

Japan. Despite the onset of a recession, the economy of Japan achieved the world's highest rate of growth (16.3%) during the 1964–65 fiscal year. For the past several years, Japan has moved toward shipbuilding and other heavy industries and away from small-scale production. It was becoming increasingly evident that the economic progress and stability of Asia might depend to a large extent on Japan's participation in that continent's economic development.

On Oct. 16, 1965, Japan announced that nine countries of Southeast Asia—Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, South Vietnam, and Thailand—had been invited to attend a regional economic conference in January 1966 (later postponed to April). It was hoped that agreement would be reached on the creation of a mutual economic assistance organization.

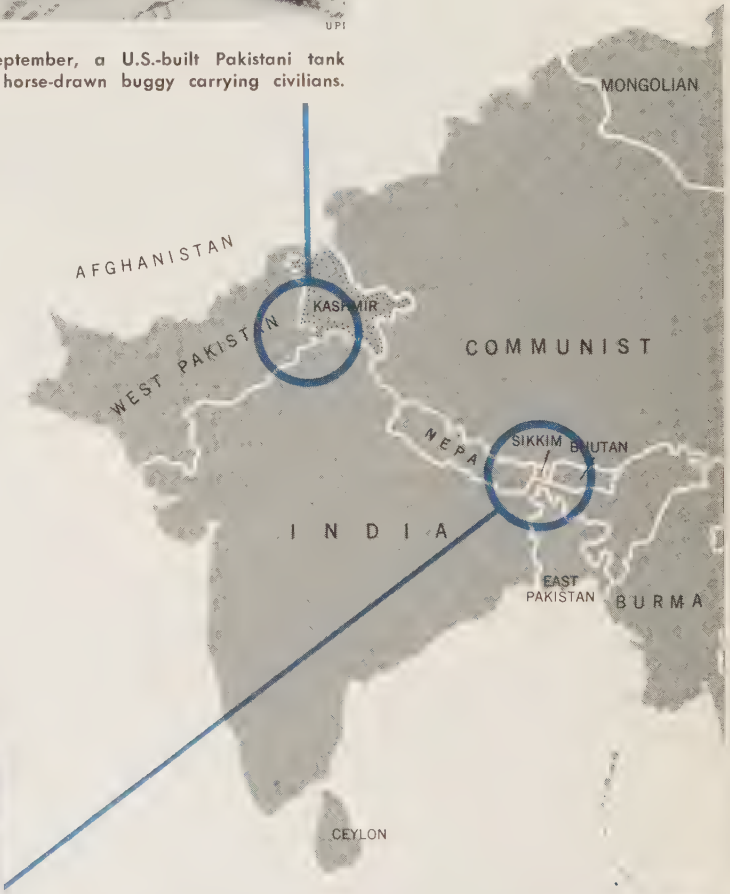
(*Continued on page 90*)


UPI

DURING INDIAN-PAKISTANI CONFLICT in September, a U.S.-built Pakistani tank on its way to the front line rumbles past a horse-drawn buggy carrying civilians.

ASIA: 1965

As the war in Vietnam mounted in intensity, India and Pakistan fought a brief but bitter conflict in August and September, during which Communist China again threatened India. Indonesia hailed Singapore's secession from Malaysia in August as a victory in President Sukarno's campaign to break up the Malaysian Federation, but in Indonesia itself a bloody civil war began in October between nationalists and Communists after leftists attempted to take over control of the government.


MONGOLIAN
AFGHANISTAN
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COMMUNIST
WEST PAKISTAN
NEPA
SIKKIM
BHUTAN
INDIA
EAST PAKISTAN
BURMA
CEYLON

NEAR CHINESE-INDIAN BORDER, soldiers of an Indian mountain division guard against a threatened Communist attack in September.

UPI

INDONESIAN NATIONALISTS hunt down Communists after leftist coup failed on October 1.

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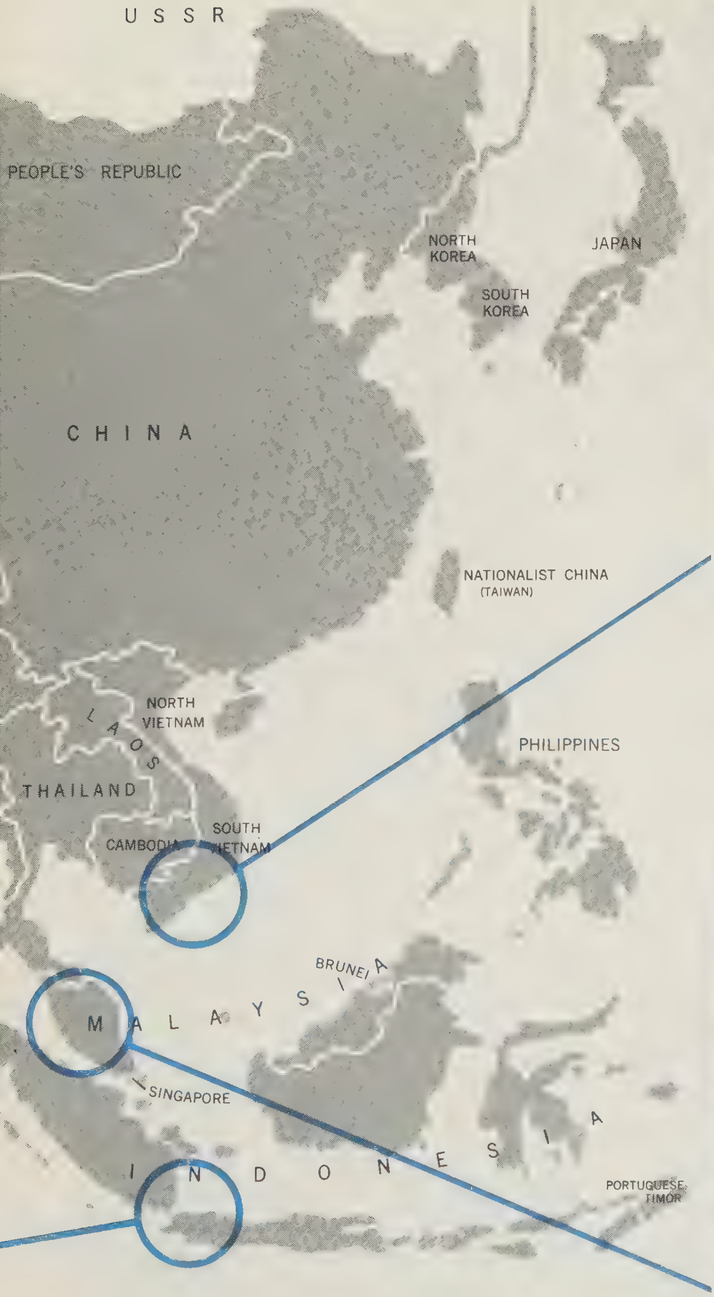
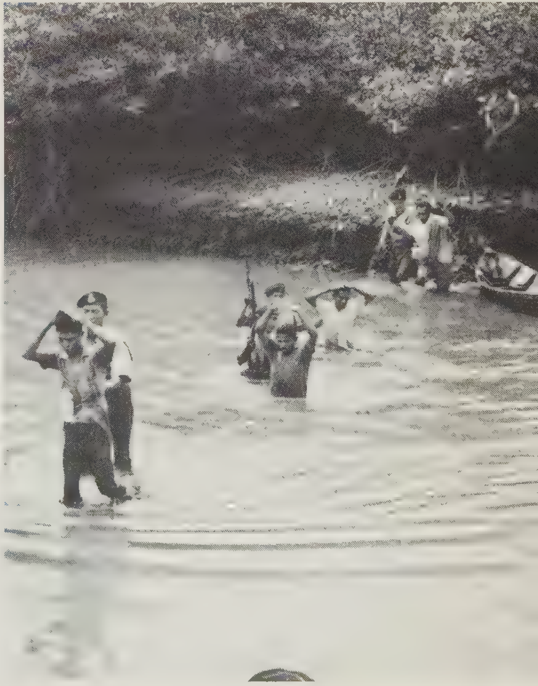

USSR
PEOPLE'S REPUBLIC
CHINA
NORTH KOREA
SOUTH KOREA
JAPAN
NATIONALIST CHINA (TAIWAN)
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
PHILIPPINES
BRUNEI
MALAYSIA
SINGAPORE
INDONESIA
PORTUGUESE TIMOR

UPI

SOUTH VIETNAMESE RANGERS make their way through swamp and jungle during hunt for Vietcong guerrilla forces in Tien Giang region.

MALAYSIAN POLICE round up Indonesian guerrilla infiltrators whose mission was to carry out Sukarno's threat to crush Malaysia.

UPI



An augury of regional cooperation was seen in the signing on June 22 of a treaty between Japan and South Korea establishing full diplomatic relations. Korea was ruled as a colony of Japan from 1910 to 1945, and after Korean independence the relations between them remained cool. The treaty, which was effected after 14 years of intermittent negotiation, provided for substantial Japanese aid to Korea and for the settlement of outstanding Korean claims against Japan and other disputes.

Laos. Contrary to all pessimistic forecasts, 1965 turned out to be a year of relative well-being for Laos. Prince Souvanna Phouma's government showed heartening signs of political stability. To the benefit of the government, the Communists, who nominally hold four seats in the cabinet, have been boycotting cabinet meetings for the past two years. At the other end of the political spectrum, the rightist general, Phoumi Nosavan, was exiled in February after leading an abortive coup. With the support of other right-wing leaders, Souvanna Phouma won a clear victory in the general election of July. Meanwhile, the Communist Pathet Lao forces were weakened by the diversion of supplies to the Vietcong, and controlled less territory by the end of 1965 than at any time since 1961.

Cambodia. Under the adroit rule of Prince Norodom Sihanouk, Cambodia struggled to stay clear of great-power politics in Southeast Asia. Prince Sihanouk, who earlier had cut Cambodia off from U.S. aid programs, finally severed diplomatic relations with Washington on May 17, 1965. In the fall he embarked on a four-month tour of Communist China, North Korea, and Europe. Nevertheless, he allowed few foreign Communists to enter Cambodia, and the small Cambodian Communist Party was given little room for action.

Thailand. A SEATO member, Thailand proceeded in 1965 to strengthen its northeastern provinces in preparation for a possible invasion by Communists from Laos. Thai rural development teams, trained and financed by the United States, made considerable headway in building roads and developing new markets for local cash crops.

Secession of Singapore from Malaysia. One of the most disturbing events of the year in Asia was the secession of the great port-city of Singapore from Malaysia. Malaysia had come into being on Sept. 16, 1963, when the independent Federation of Malaya merged with the self-governing state of Singapore and the British colonies of North Borneo (now Sabah) and Sarawak. The new federation immediately came under attack by Indonesia, and was subjected to irredentist territorial claims by the Philippines. In spite of these external pressures, Malaysia became a relatively stable political entity, prosperous and pro-Western.

The new nation, however, was beset by simmering tensions between the Chinese, the largest racial community in the federation, and the Malays, who controlled the federal government. (Before the secession of Singapore, Chinese constituted 43% of the population of Malaysia and 75% of the population of Singapore.) The interracial rivalry came to a head when Lee Kuan Yew, the prime minister of Singapore and leader of the Chinese community in Malaysia, began to campaign for the Chinese population's having a bigger voice in the federal government. The Malays, on the other hand, considered their control of the federal government to be a prerogative guaranteed by the constitution, and were fearful that the federation might eventually come under Chinese domination. In a desperate attempt to avoid an interracial crisis that could conceivably lead to bloodshed, and to maintain control of his own Malay supporters, Tunku Abdul Rahman, the prime minister of the federation, decided to ask Singapore to secede.

The secession of Singapore from Malaysia, announced on Aug. 9, 1965, after a meeting between Tunku Abdul Rahman and Lee Kuan Yew in Kuala Lumpur, came as a complete surprise. Nevertheless, Singapore's independence was quickly recognized by a majority of the nations of the world, and the new country was admitted to membership in the United Nations in September.

As a sovereign state, Singapore is something of a political anomaly. Nevertheless, if it can continue to earn its living by trade, it has better prospects of viability than many other new nations of the world. In Malaysia, Singapore's withdrawal necessarily opened up new speculation regarding the future of northern Borneo. Neither Sabah nor Sarawak are totally satisfied with the rule of the federal government in Kuala Lumpur.

Political Crisis in Indonesia. The question of race relations between the Chinese and the other races was one of the key issues in the abortive coup in Indonesia on Oct. 1, 1965. This coup was directed against President Sukarno and seemed to have been inspired by the Communists, even if they were not directly involved. There was little doubt that if the attempt had succeeded, the Communists would have been the principal beneficiaries.

Since the coup failed, the Indonesian Communist party became the principal loser. However, the personal authority of Sukarno also suffered, and, for the first time since Indonesia achieved independence 15 years ago, his power was curtailed. For some years, Sukarno's position had depended on maintaining a delicate balance between the army and the Indonesian Communist party—the largest Communist party in Asia, outside of China. The suppression of the coup by the army and the subsequent arrest of Communist leaders virtually removed the Communist party as a political force and placed the army in control of the government. Much popular hostility was also unleased against the Communist party and the Indonesian Chinese population. Indonesian rioters, who had once burned American libraries and destroyed the British embassy in Djakarta, turned instead to attacking the premises of the Communist party. These events, which Peking was powerless to avert, contributed further to the decline of Chinese prestige.

However, it was too early to predict what course Indonesia would follow in the future. By late February 1966, the resilient Sukarno had recovered sufficient prestige to oust from his post of minister of defense and chief of staff of the armed forces General Nasution, the man chiefly responsible for the anti-Communist and anti-Chinese campaign that followed the abortive October 1 coup. Fourteen other strongly anti-Communist ministers were replaced, and Sukarno openly praised the Indonesian Communist party for its contributions to the nation since independence.

SEATO. The tenth meeting of the South East Asia Treaty Organization (SEATO) Council was held in London, May 3–5, 1965. All members (Australia, France, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom, and the United States) were present at the meeting, although France was represented only by an observer. The council's final communiqué stated that "substantial assistance and reinforcement have been given during the past year by certain member governments in order to assist South Vietnam in resisting aggression from the north," and noted that SEATO members agreed "to continue and, consistent with their commitments elsewhere, to increase their assistance to South Vietnam."

Jesús M. Vargas, former secretary of defense of the Philippines, took office on July 1, 1965, as SEATO secretary general. He replaced Konthi Suphamongkhon of Thailand, whose term had expired.

SOUTH ASIA

Indo-Pakistani Conflict. Another theater of war opened during 1965 when long-smouldering ill feeling between India and Pakistan broke out into open hostilities first, in April, in the desolate Rann of Kutch region and then, in August, in Kashmir and along the Indo-Pakistani border. The fundamental issue lay in the question of whether India had sincerely accepted Pakistan's existence as an independent state. Pakistan, on the other hand, being much the smaller of the two, never felt secure from some eventual Indian attempt to terminate Pakistani independence. Pakistan's apprehension grew when the United States began to give military aid to India during the two-month Indo-Chinese war in 1962.

Pakistan was disappointed in its search for allies to bolster its position vis-à-vis India. Neither its mutual security agreement with the United States nor its membership in SEATO and CENTO (between which Pakistan forms a link, being the only Asian member of both alliances) paid off in terms of support against India. Furthermore, the recent reorientation of Pakistan's foreign policy toward a rapprochement with Peking proved equally disappointing. India rejected a Chinese ultimatum to withdraw its troops from the frontier regions of Sikkim, and China did not follow this rejection with action.

The Indo-Pakistani war dwindled into sporadic flare-ups after a cease-fire was imposed on the belligerents on September 23 by the UN Security Council. (The United States and the Soviet Union had pursued parallel policies on this issue.) Consequently the major source of friction between India and Pakistan, the Kashmir situation, reverted to the status quo that had existed for 18 years before the recent conflict. India continued to insist that Kashmir was an integral part of India, and Pakistan continued to demand that the UN resolution calling for a plebiscite be implemented.

A major step toward a lasting peace on the subcontinent was taken on Jan. 10, 1966, when President Mohammed Ayub Khan of Pakistan and Prime Minister Lal Bahadur Shastri of India signed an accord providing for troop withdrawals to positions held prior to the outbreak of fighting in Kashmir on Aug. 5, 1965. The two leaders had met in Tashkent, Soviet Asia, at the invitation of Soviet Premier Kosygin, who acted as mediator, and the accord, known as the Declaration of Tashkent, was signed just hours before Shastri's sudden death of a heart attack on Jan. 11, 1966. In the declaration, India and Pakistan pledged to observe the cease-fire line, to restore normal diplomatic and economic relations, to follow the principle of noninterference in each other's internal affairs, and to settle disputes through peaceful means. On Feb. 26, 1966, UN Secretary-General U Thant confirmed that India and Pakistan had completed the troop withdrawal as agreed upon at Tashkent.

Ceylon. In March the pro-Western United National party, which had been out of power since 1956, won a decided victory in the general election. After assuming office, the new prime minister, Dudley Senanayake, undertook to open negotiations with American and British oil companies to settle the disputes which had arisen under the former government of Mrs. Sirimavo Bandaranaike. Measures were also taken by the new government to restore the ravaged economy of the country. Although the interracial fissures between the Sinhalese and the Tamils remained a serious social problem, the political and economic situation in Ceylon appeared more hopeful than it had been at any time since 1956.

MIDDLE EAST

An unusual and welcome quiet pervaded the Middle East during 1965. Although no fundamental problems were solved, and some minor disturbances occurred, there was less serious trouble on the whole than in any recent years.

CENTO. Members of the Central Treaty Organization (CENTO)—Iran, Pakistan, Turkey, and the United Kingdom—marked the 10th anniversary of the organization's founding on February 24. The 13th session of the CENTO Council of Ministers was held in Teheran, April 7–8. CENTO's major activities in recent years have been concerned with developments in economics and communications. However, the organization was faced with more pressing matters in 1965, when the Indo-Pakistani conflict threw the future of CENTO into some doubt because neither Turkey nor Iran gave Pakistan more than verbal support in its brief struggle with India.

Yemen War Ends. The dispute between the United Arab Republic and Saudi Arabia over Yemen was resolved by a compromise on August 24, that ended the three-year Yemeni civil war in which the two major Arab states had supported opposing sides. Under the compromise, Saudi Arabia agreed to stop providing military aid to Yemeni royalist forces, and the United Arab Republic agreed to with draw the 60,000-man force it had sent to support the republican troops. The agreement also provided for a national plebiscite in Yemen, to be held on Nov. 23, 1966, to decide the country's political future.

President Nasser's Position. Something of a retreat on the part of President Gamal Abdel Nasser of the United Arab Republic could be seen in the moderate mood prevailing at the meeting of the Arab League leaders held at Casablanca, Morocco, September 11–18. The league made its customary denunciations of Israel, but indefinitely postponed plans for joint military action against the Jewish state. A further weakening of Nasser's influence was apparent in cabinet changes in Iraq in July, when President Abdul Salaim Arif dropped pro-Nasserite ministers, and in Syria in August, when the anti-Nasser Baathist party was strengthened. However, a split in Syria's Baathist party brought victory for the leftist wing in a coup on Feb. 23, 1966.

(See also FOREIGN POLICY, U.S.; UNITED NATIONS; and articles on Asian countries.)

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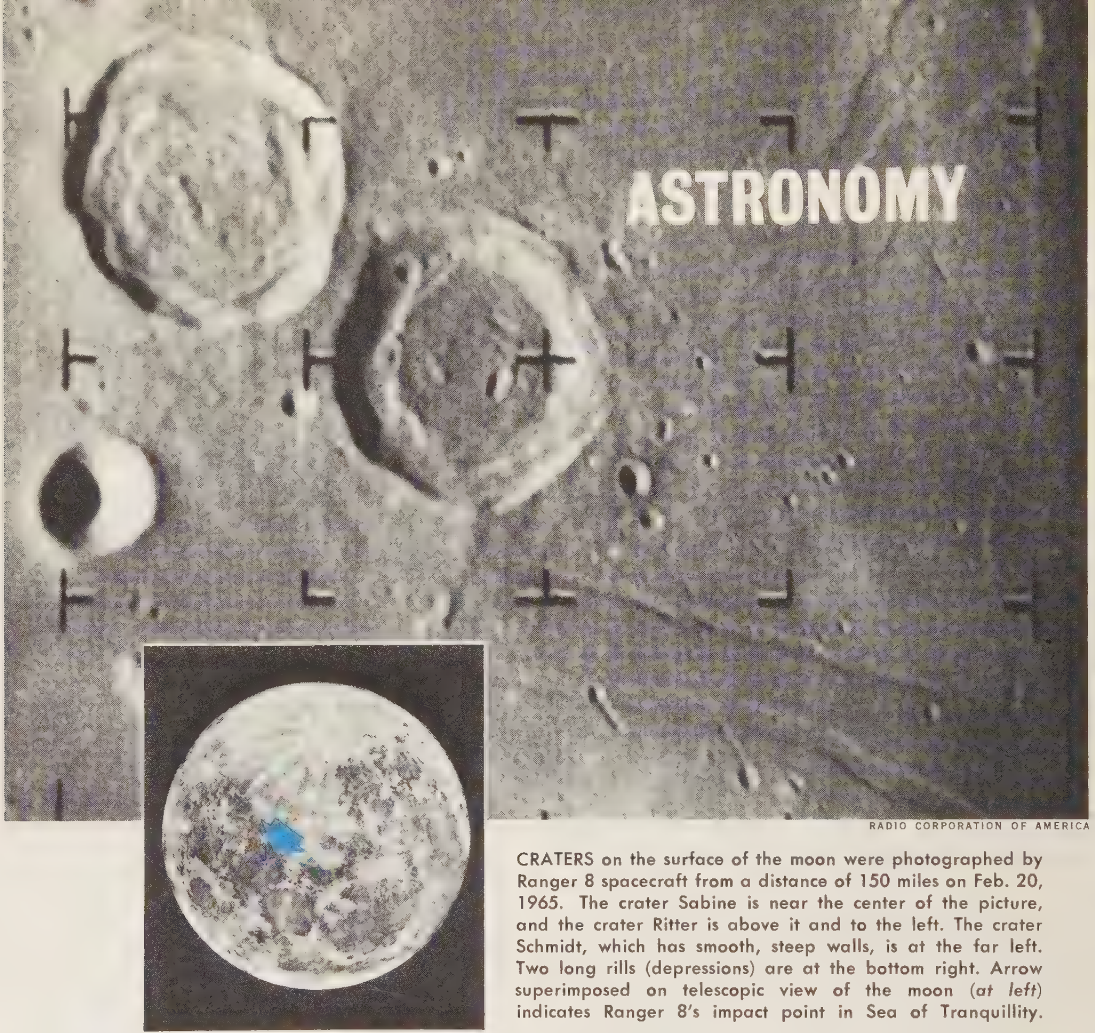
ASSOCIATIONS. See SOCIETIES AND ORGANIZATIONS.

ASTRONAUTICS. See SPACE EXPLORATION.



RADIO CORPORATION OF AMERICA

LICK OBSERVATORY

CRATERS on the surface of the moon were photographed by Ranger 8 spacecraft from a distance of 150 miles on Feb. 20, 1965. The crater Sabine is near the center of the picture, and the crater Ritter is above it and to the left. The crater Schmidt, which has smooth, steep walls, is at the far left. Two long rills (depressions) are at the bottom right. Arrow superimposed on telescopic view of the moon (*at left*) indicates Ranger 8's impact point in Sea of Tranquillity.

ASTRONOMY

The year 1965 was marked by advances in astronomy that considerably increased man's knowledge of the solar system but raised new questions about far-distant objects in the universe.

The moon, sun, Venus, and Mars—neighbors of earth in the solar system—were intensively observed by means of a variety of advanced techniques. Both Mars and Venus were found to be inhospitable to life. Photographs taken of Mars by the Mariner 4 spacecraft showed the planet to be much like the moon. Photographs of the moon's terrain sent back to earth by the Ranger 8 and Ranger 9 spacecraft provided important data for the United States program to land men on the moon.

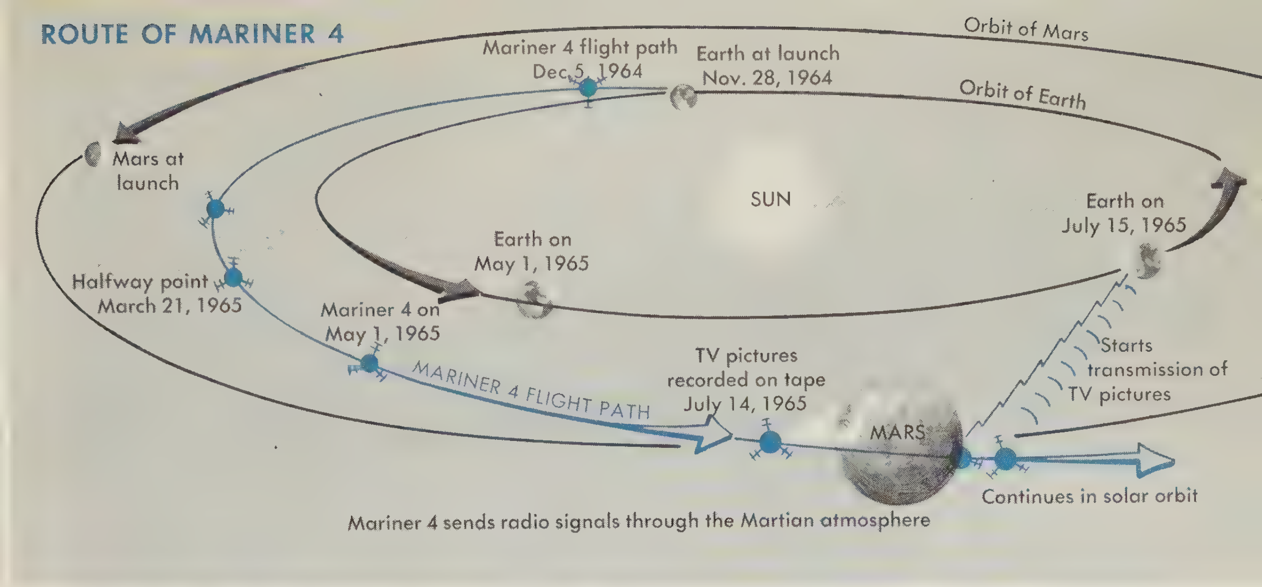
Observations of distant objects in the universe opened new paths in 1965 for investigating and understanding the nature and evolution of stars, the quasi-stellar radio sources (quasars), and the quasi-stellar blue galaxies.

In October, comet Ikeya-Seki, the brightest comet since 1882, grazed the sun at a distance of only 300,000 miles and gave astronomers an unusual opportunity to study this celestial object.

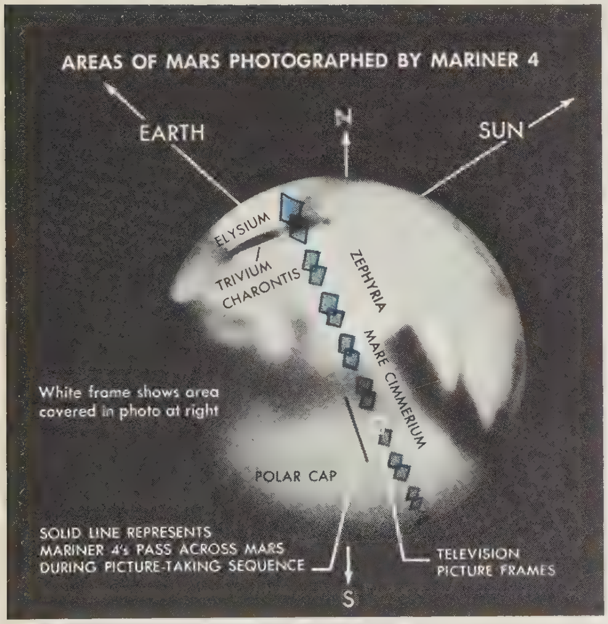
Mariner 4 Voyage to Mars. In July 1965, after a difficult but outstandingly successful 7½-month flight over a total distance of 325 million miles, the Mariner 4 spacecraft provided surprising photographs of Mars. Although Mars had been regarded as a sister planet of the earth, it proved to be more like the moon—full of craters, and desolate and dry. The 21 pictures of the surface of Mars, transmitted to earth on July 15–24 when Mariner 4 was about 134–142 million miles away, were taken at distances from Mars ranging from 10,500 to 6,118 miles. These pictures are enormously superior to any photographs taken from the earth or to any drawings made during a century of visual observations. They show no trace of "canals," seas, or oases, but they do show a pockmarked landscape full of craters formed by the impact of giant meteorites.

Scientists at the Jet Propulsion Laboratory and the California Institute of Technology, who analyzed the photographs, found 70 craters, ranging from 3 to 75 miles in diameter, in the 1 percent of the area of Mars that was photographed. From the length of shadows, they concluded that the crater rims rise a few hundred feet above the surface of Mars, and the bottoms are a few thousand feet below the surface. Some craters have central peaks and younger craters on their floor or walls.

The meteorite bombardment that produced these craters continued for a long time. Some craters are so shallow and worn that they appear to be very old. However, after the violent bombardment by meteorites or small asteroids, Mars experienced no great geological events to destroy the collision features. For example, it did not undergo the geological formations and changes that on earth


ROUTE OF MARINER 4
Orbit of Mars
Mariner 4 flight path Dec. 5, 1964
Earth at launch Nov. 28, 1964
Orbit of Earth
Mars at launch
SUN
Earth on July 15, 1965
Earth on May 1, 1965
Halfway point March 21, 1965
Mariner 4 on May 1, 1965
Starts transmission of TV pictures
TV pictures recorded on tape July 14, 1965
MARINER 4 FLIGHT PATH
MARS
Continues in solar orbit
Mariner 4 sends radio signals through the Martian atmosphere

MARINER 4 made a 228-day, 325 million-mile trip to Mars, took pictures of the planet's surface, and transmitted them back to earth as it continued on its trip around the sun.


AREAS OF MARS PHOTOGRAPHED BY MARINER 4
EARTH
N
SUN
ELYSIUM
TRIVIUM CHARONTIS
ZEPHYRIA
MARE CIMMERIUM
White frame shows area covered in photo at right
POLAR CAP
SOLID LINE REPRESENTS MARINER 4's PASS ACROSS MARS DURING PICTURE-TAKING SEQUENCE
TELEVISION PICTURE FRAMES
S

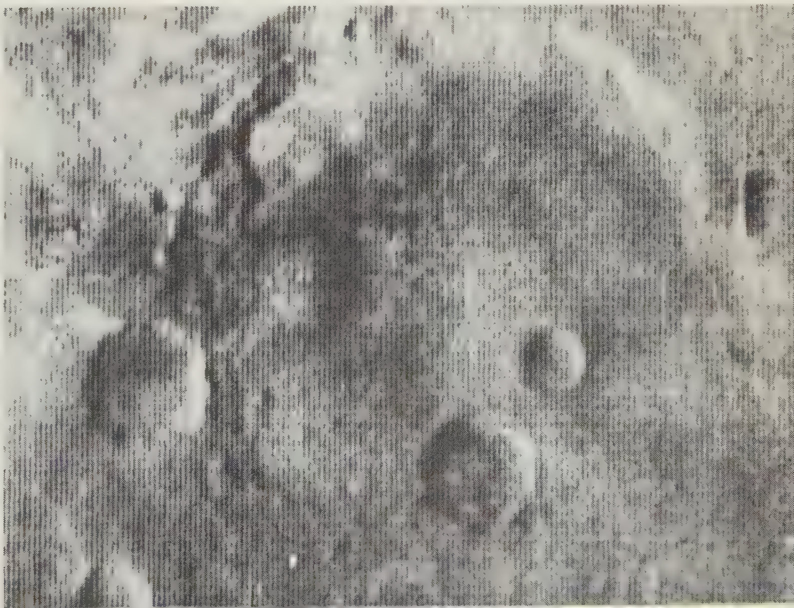
produced oceans, continents, and long, folded mountain ranges that became worn by erosion.

Unlike Mars, the earth has a dynamic, semifluid core that produces continent-lifting forces, mountain ranges atop the continents, and earthquake and volcano belts. The circulation of electric charges in this hot material also produces the earth's magnetic field, which varies as these subterranean currents change. Data from Mariner 4 showed that Mars has no dynamic core. A sensitive magnetometer on Mariner 4 showed that there was no increase in magnetic field strength as the spacecraft passed close to Mars, although the magnetometer was capable of recording a field strength 10,000 times weaker than that of the earth. Nor did analysis of the Mariner 4 data detect any evidence of trapped radiation belts around Mars. (The Van Allen radiation belts around the earth are particles trapped by the earth's magnetic field.)

Prior to Mariner 4, measurements of the Martian atmosphere, using the telescope at the Mount Wilson

MARTIAN SURFACE areas (*above*) were photographed by Mariner 4 on July 14, 1965, at distances of 10,500 to 6,118 miles. The spacecraft took 21 pictures, of which 16 are indicated by rectangles. The planet's surface (*right*), depicted in the 11th photograph (area designated by the white rectangle above), is covered with craters like those on the moon. The large crater, with two small ones inside it, is about 75 miles in diameter.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



Observatory, showed that the atmosphere of Mars was about 40 times as thin as that of the earth. Also, the spectra of the planet Mars showed that it lacked oxygen or water vapor, except as ice in the frozen polar caps.

The flight of Mariner 4 provided more information on the atmosphere of Mars. When the spacecraft moved behind Mars, its radio signals passed through the Martian atmosphere as they traveled toward receivers on earth. The atmosphere of Mars had only a very little effect on the radio signals. The evidence indicates that the planet has almost no atmospheric shield against bombardment by meteorites and high-energy particles from space (cosmic radiation), and that its atmosphere is even thinner than what was expected. Mars seems to be, and perhaps always has been, a dead world.

Moon Photographs. The spacecraft Ranger 8 sent back 7,137 close-up photographs of the moon before it crashed in the Sea of Tranquillity on Feb. 20, 1965. The photographs showed enormously fine detail, including long chains of elongated craters. The final frames showed craters with loose rocks on their walls, presumably impact debris. The pictures from Ranger 8 also showed a clearly defined pair of rills (long depressions in the lunar surface) in the relatively flat surface of the Sea of Tranquillity.

Ranger 9 sent back 5,814 pictures of the moon before it plunged into the crater Alphonsus on March 24. The crater, 50 miles wide, with a 3,300-foot peak at its center, probably was formed by the impact of a huge object. The successively closer pictures of Alphonsus showed that its walls are old, highly eroded by later impacts, and smoother than had been expected. On its floor are irregular rills. The smallest craters that could be seen in Alphonsus are only 30 inches across.

Before Ranger 9, there was a question as to whether Alphonsus showed volcanic activity. Darker-than-average spots on the photographs appear to be deposits of ash similar to those produced by volcanic explosions on earth. Even the rills, which contain dimplelike depressions, are partly filled with ash. However, the area near the peak of Alphonsus showed no particular evidence of any volcanic structures similar to those seen on earth.

The Soviet space probe Zond 3 transmitted excellent photographs of the far side of the moon. The pictures, taken on July 20, 1965, from a distance of about 7,000 miles, had a resolution about equal to that of the Mariner 4 pictures of Mars. They showed only a few large maria (seas), but an enormous number of large and small craters. A preliminary Soviet study indicated that there are even more craters on the far side of the moon than on the near side, as well as more mountainous areas and long chains of craters.

The Temperature of Venus. Other than Mars, Venus is the only planet in the solar system that was considered as a possibility for supporting advanced forms of life. Venus, a twin of the earth in size, has a very dense and opaque atmosphere that is approximately 40 miles thick. Infrared measurements of the temperature in the upper Venusian atmosphere (mapped in detail by Bruce C. Murray, James A. Westphal, and Robert L. Wildey in 1965) show that the temperature is very low, ranging from −63°F. to −108°F. It is lowest near the poles, and practically the same throughout day and night. At 40 miles above the surface, the temperature apparently is determined by the circulation of heated air by winds, and not by the direct heat of the sun. Near the top of the atmosphere it is too cold for much water vapor to exist. Spectroscopic observations had shown previously that carbon dioxide is the major component of the atmosphere, rather than oxygen or water.

High-frequency radio waves, which penetrate the Venusian cloud layer, perhaps all the way to the surface, were used in 1965 to measure the surface temperature of Venus. Barry Clark, together with Arkady Kuzmin, a Soviet scientist visiting the California Institute of Technology, found that the night side of Venus reaches a temperature of about 680°F., and the day side may be even hotter. The poles are about 300°F. cooler than the night side.

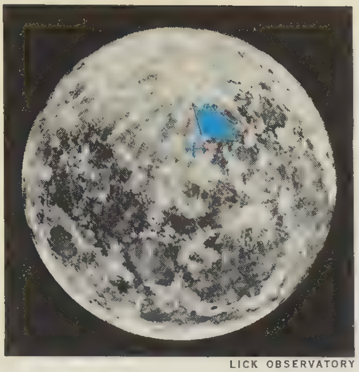
The atmospheric pressure at the surface of Venus is probably very high, perhaps 10 to 50 times greater than that at the surface of the earth. The high temperatures in such a dense atmosphere suggest that hot, dry, dusty, high-velocity winds carry heat around the planet. The thick atmosphere traps solar radiation and raises the surface temperature far above what scientists had expected. Venus appears to have too much atmosphere to support life, and Mars has too little.

Comet. Comet Ikeya-Seki, discovered by the Japanese astronomers Kaoru Ikeya and Tsutomu Seki on Sept. 18, 1965, made a hairpin turn around the sun on October 21 at a distance of about 300,000 miles. The comet appeared to be 10 times brighter than the full moon, was visible in the daytime, and had a curved tail about 75 million miles long. The nucleus of the comet was estimated to be 50 miles in diameter, and the coma around the nucleus was estimated to be 30,000 miles across. The vaporized materials in the comet included iron, nickel, copper, sodium, calcium, and potassium, according to George Preston of the Lick Observatory. The Ikeya-Seki comet is the eighth since 1668 of the group of sun-grazing comets that have an orbital period longer than 1,000 years.

The Sun and the Stars. An important total eclipse of the sun was successfully observed in the South Pacific on May 30, 1965. Scientists in a jet plane flying in the same direction as the shadow of the moon moving across the earth were able to record data with their instruments during a total eclipse that lasted 9 minutes and 42 seconds, the longest on record. For ground observers, the total eclipse lasted only about 4 minutes.

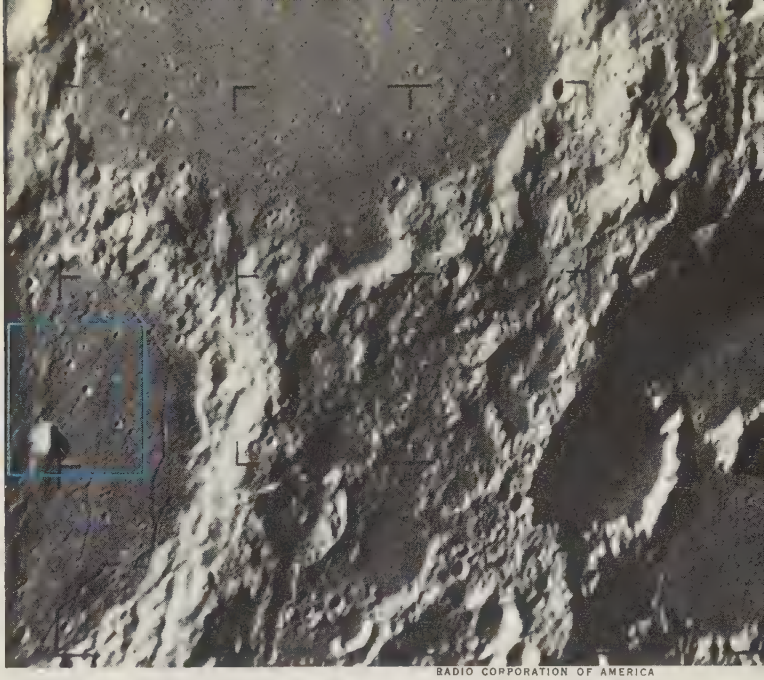
Studies of photographs of the solar surface revealed that magnetic fields slightly stronger than average are always present in the hotter, brighter areas on the surface and above it in the region called the chromosphere. These hot areas are large, and they vary slowly in shape and size. Nearly vertical features like flames are concentrated along the bright rims of these hot areas.

The chromosphere of the sun has been studied by observing a spectral line of ionized calcium—the so-called K-emission line. Studies of stars of various ages made by Olin C. Wilson showed that the youngest stars have the strongest K-emission lines. This indicates that a star is born with a very active chromosphere, which virtually fades out in a few billion years. Other evidence of great chromospheric activity in stars was found in 1965 from studies of the strength of the absorption lines of lithium. These studies were made at the Lick Observatory by George Herbig and George Wallerstein. Lithium is easily destroyed by nuclear processes inside a star, and thus younger stars have more lithium than the sun. Some old stars, however,



LICK OBSERVATORY

MOON photographs of great detail were taken by Ranger 9 spacecraft on March 24, 1965. Ranger 9 took 5,814 pictures before it crashed into the crater Alphonsus. Target point for this spacecraft, as indicated above, was near the central peak of Alphonsus. The sequence of four pictures shows Alphonsus at distances ranging from 775 to 0.75 miles.



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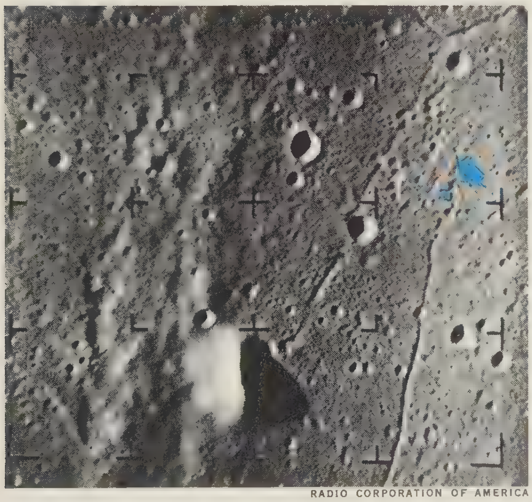
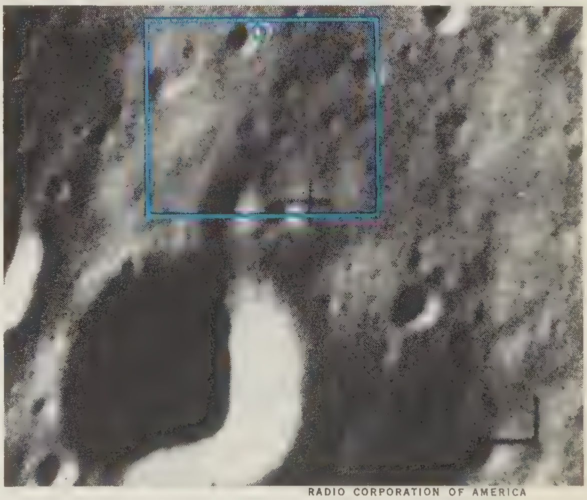
RANGER 9, when 775 miles from the moon, transmitted this view of craters Alphonsus (l.), Ptolemaeus (top), and Albategnius (r.). Square shows area of next picture; dot indicates point of impact.



RADIO CORPORATION OF AMERICA

CENTRAL PEAK of Alphonsus, 3,300 feet high, was photographed at a distance of 58 miles. Crater floor has smaller craters and rills, in an area of 28 by 24 miles. Square shows area covered in next picture.

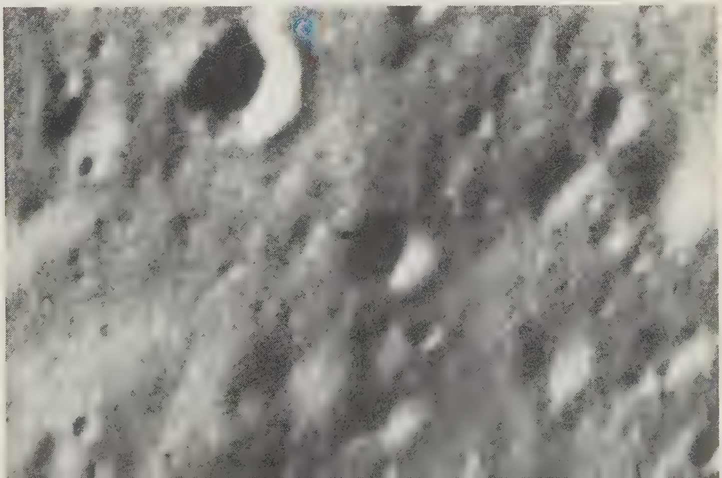


RADIO CORPORATION OF AMERICA

FLOOR of the crater Alphonsus is shown in this photograph taken by Ranger 9 as it neared the impact point (circle) beside a 25-foot-wide crater. The square shows area covered by the photograph below.

SMALLEST CRATERS in last complete picture by Ranger 9 are about 2.5 feet wide. Stones half buried in surface material are barely visible. Taken at distance of 0.75 mile, picture covers area of 155 by 125 feet. Circle shows Ranger 9's impact point.

RADIO CORPORATION OF AMERICA



UNIVERSITY OF CALIFORNIA

SUN-GRAZER COMET Ikeya-Seki, discovered on Sept. 18, 1965, had a tail estimated to be 75 million miles long.

still have considerable amounts of lithium, which is probably manufactured by nuclear bombardment in the magnetic fields of their chromospheres.

Observations by Hyron Spinrad of the University of California have shown that there is water vapor around very cool stars. Spinrad observed spectra with molecular bands that are strengthened when water is hot. This evidence indicates that the very cool stars are surrounded by hot clouds of steam.

Even cooler stars than those studied by Spinrad were detected in 1965 by physicists Gerry Neugebauer, Dowell Martz, and Robert B. Leighton, who used an aluminum-coated plastic mirror 62 inches in diameter to gather the infrared radiation from individual stars. The cool stars detected have temperatures of only 700°C (the surface temperature of the sun is about 5400°C). Most radiation from these stars is emitted at far infrared wavelengths.

An extensive catalog of accurately determined physical properties of very small stars, called white dwarfs, was completed in 1965 by Olin Eggen and Jesse Greenstein at Palomar Observatory. Accurate colors, temperatures, and spectral composition have been determined for 200 white dwarfs, and distances from the earth have been determined for about 50. On the average, a white dwarf has a mass about one half that of the sun, and a diameter about one fiftieth that of the sun. The average density of white dwarfs is more than one ton per cubic inch. These strange objects are a final stage in stellar evolution. Spectra of white dwarfs show that they are made of helium, carbon, and some hydrogen.

Quasars. The most exciting developments in radio astronomy in 1965 concerned the further identification and study of the quasi-stellar radio sources, called quasars. These extraordinary objects are distant, faint, point sources of radio-frequency noise. They emit more strongly at short wavelengths than do other radio sources such as distant galaxies. But their outstanding features are their small angular size and the great red shift of the light from the starlike objects connected with the radio sources. At least 60 quasars have been identified by radio observations in England, Australia, and the United States, and by optical telescope work, largely at Palomar.

The velocity and distance of an object can be computed from measurements of the shifts in the lines of its spectrum. For objects that are moving away from earth, the spectral lines are shifted toward the red end of the spectrum; for objects that are moving toward earth, the lines are shifted toward the violet end of the spectrum.

The spectra of the starlike objects show broad, weak emission lines that are characteristic of strongly heated gases of hydrogen, carbon, oxygen, neon, magnesium, and silicon. These emission lines are shifted from their original wavelengths to longer wavelengths, that is, toward the red end of the spectrum. For the quasar 3C 9, Maarten Schmidt measured a red shift of 200%. He also found that four quasars have red shifts greater than 100%. A red shift of 100% corresponds to a radial velocity of the object of 180,000 km/sec; a red shift of 200% corresponds to a velocity of 240,000 km/sec, which is 80% of the velocity of light. It has been estimated that quasar 3C 9 (radio source 9 in the third University of Cambridge catalog) is 8.7 billion light years away from earth. (On Dec. 15, 1965, M.E. Burbidge reported finding a quasar, 0106+01, receding at 81% of the velocity of light.)

Stars with red or violet shifts indicating a velocity of a few hundred kilometers per second have been familiar for some time. Large red shifts have been associated only with very distant galaxies and the expansion of the universe. The most distant galaxy known (radio source 3C 295) had a red shift of only 46 percent. The relationship between the red shift and the distance of an object has been reliable for all remote galaxies. A question still being debated is whether quasars, in fact, have these enormous distances or whether there is some unknown cause for the red shifts. Is it possible that intense fields of gravity cause the red shifts? Greenstein and Schmidt do not think so.

Present evidence favors the interpretation that quasars are enormously distant objects of a strange new type. The Milky Way contains 200 billion stars and is 100,000 light years across. A quasar has a volume of only a few light years across, but it emits 100 times as much light as does the whole Milky Way. It is difficult to explain the great brightness of quasars in terms of ordinary sources of nuclear energy. Thus, it may be necessary to account for the great output of light from a quasar by postulating some new source of energy.

An exciting new quasar discovery was made in 1965 by W.A. Dent of the University of Michigan. He found variations in the strength of the high-frequency radio noise from 3C 273, the brightest and nearest quasar known. The variations in the brightness of this object, detected at optical wavelengths, helped to establish that it was only a few light years in diameter. The radio emission was supposed to come from a large region perhaps a thousand light years across. Dent found that the radio noise from 3C 273 increased over a three-year period, indicating that the size of the radio-emitting region of 3C 273 is very small, perhaps also only a few light years across. Dent's discovery is an important one.

Quasi-Stellar Blue Galaxies. Enormously distant superluminous objects were identified and analyzed by Allan Sandage in 1965. These objects, called quasi-stellar blue galaxies, differ from quasars in that they are not strong sources of emissions at radio frequencies. They differ from galaxies in that they are very small, in spite of their enormous brightness, and are rich in ultraviolet light.

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ATMOSPHERE RESEARCH

Among the significant developments in atmosphere research during 1965 were new findings about the formation of noctilucent clouds. For many years meteorologists have been puzzled by the very fleeting appearance of these wispy clouds at altitudes of about 48 miles. They occur during the summer at high latitudes (generally above 45°), and often have a wavelike character. There has long been speculation as to whether they are composed of dust or water vapor.

Formation of Noctilucent Clouds. Recent analyses of samples collected by rockets in the upper atmosphere over Sweden show that noctilucent clouds contain dust particles of nickle micrometeorites which seem to be enveloped in ice. By calculating the upward diffusion of water vapor from the mesosphere and the downward drift of dust from the exosphere, it has been shown that noctilucent clouds are probably formed by a unique admixture of dust and water vapor when the mesopause is unusually cold. Water vapor condenses on a dust ledge occurring at the mesopause and forms clouds which are visible at twilight.

Thunderstorm Electrification. The investigation of thunderstorm electrification is one of the most challenging problems in atmosphere research. In a thunderstorm, a negative charge apparently is brought to the top of the cloud by electrical conduction from the ionosphere and then is carried to the lower part of the cloud by downdrafts. At the same time the positive charge produced by the point discharge current flowing from the earth is carried to the upper part of the cloud by updrafts. Each of these currents has a strength of approximately 1 ampere. It is not yet known what role falling rain plays in thunderstorm electrification and whether or not the falling of charged precipitation is the dominant electrification process in most thunderstorms.

Observations of the new Icelandic volcano on the island of Surtsey indicate that lightning in the volcanic cloud is the result of the convection of charge in updrafts rather than the falling of electrified precipitation. If electrified thunderstorms are produced by the convective mechanism, one might expect that it would take longer for a cloud to become electrified where the space charge concentration is low, as in Illinois, than where the space charge concentration is high, as in New Mexico. This is indeed the case, for highly electrified thunderstorms are more frequent in New Mexico than in Illinois.

Upper-Lower Atmosphere Coupling. It has been shown that the outer regions of the earth's atmosphere—those above 100 kilometers—are largely under direct solar control and respond very quickly to changes in the sun's ultraviolet radiation and particle emissions. It is also true that in the upper stratosphere and mesosphere the seasonal temperature changes are very great and are contingent on the amount of sunlight present. Because it is doubtful whether short period changes in solar emission affect this region, it is difficult to understand why any changes taking place in the outer atmosphere should lead to changes in the lower atmosphere. On the other hand, it has been shown that changes in the middle stratosphere are caused by the upward extension of large-scale effects in the troposphere.

One of the most interesting meteorological discoveries of recent years is the 26-month oscillation of the zonal wind component in the tropical stratosphere. This zonal wind cycle appears to be accompanied by a temperature oscillation and a change in the total amount of ozone present. Between latitude 16° and the equator the highest temperatures precede the west wind maximum, but in the subtropics the lowest temperatures precede the maximum westerlies.

There is evidence that the 26-month oscillation has two superposed modes: a tropical mode characterized by a vertically propagating wave, and a global mode consisting of a standing wave from a pole to the equator. The global mode appears to be characterized by the simultaneous occurrence of westerly winds, low temperatures, low ozone content, and ascending motions at all levels in the temperate and polar stratospheres.

The corresponding tropical part of the standing wave is characterized by westerly winds, high temperatures, high ozone content, and subsiding air. One half-cycle later, easterlies prevail at all heights, and the temperature and ozone phases are reversed.

One theory that seeks to explain this phenomenon, but which does not seem to be substantiated, is that the oscillation originates in the heating of the ozone layer by variable solar ultraviolet radiation for a 26-month period. Another theory that seems more probable is that the oscillation begins as a subharmonic of the annual global heating cycle, even though a 26-month cycle does not appear to be a precise subharmonic. The annual heating cycle may give rise to tidal motions, which are peculiar in that the primary oscillation occurs with the semidiurnal harmonic period, rather than with the fundamental period.

Proton Whistlers. A new very-low-frequency phenomenon associated with the propagation of whistlers in the ionosphere has been found in VLF recordings from the Injun 3 and Alouette satellites. This phenomenon appears to be a dispersion of the original lightning electromagnetic impulse by ions (protons) in the ionosphere. Dispersion caused by electrons in the ionosphere and beyond is the origin of normally observed whistlers from the earth's surface. Satellite observations show that a proton whistler is always accompanied by an electron whistler. The electron whistler is propagated only from the base of the ionosphere to the satellite.

Stratospheric Aerosols. Two simultaneous balloon flights into the stratosphere in 1965 carried a coronascope to measure light scattering and an ion detector to measure ion concentration. The measurement revealed the stratosphere to be highly stratified with thin layers of ion concentration 30 meters thick, separated by ion-free layers 300 meters thick. (See also WEATHER.)

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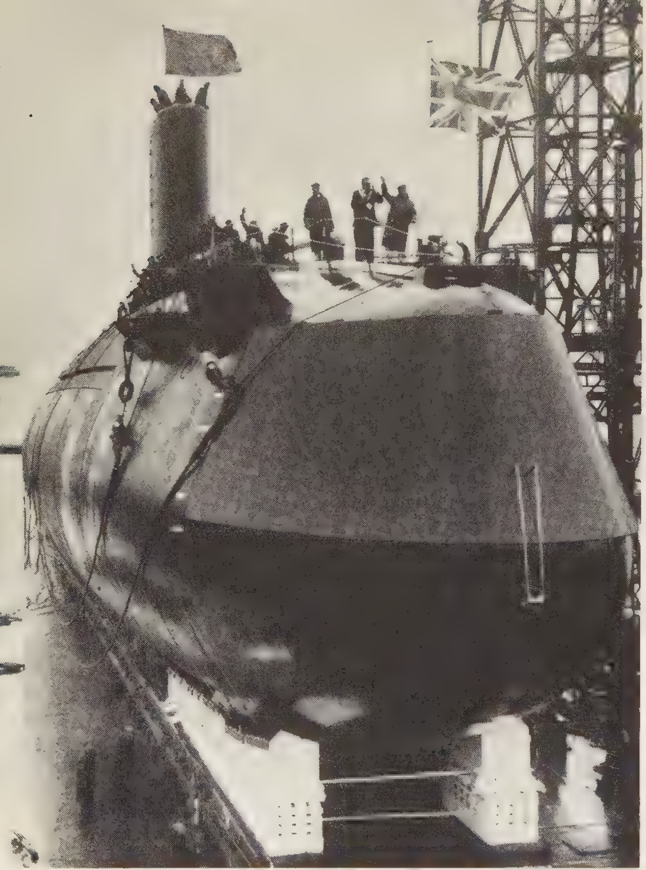

UPI

BRITAIN'S THIRD NUCLEAR-POWERED ATTACK SUB, H.M.S. *Warspite,* slides into Walney Channel after being launched at the Barrow-in-Furness shipyard, September 27.

ATOMIC ENERGY

The development of nuclear power for industrial use, water desalting, and scientific research made progress in 1965, both in the United States and in other countries. However, weapons work continued to be the largest single item in the U.S. Atomic Energy Commission's budget, and France and Communist China continued to strengthen their nuclear warfare potentials.

PEACEFUL USES OF ATOMIC ENERGY

Nuclear power plants were under construction or in the planning stage in all sections of the United States. France, Britain, and the USSR were also taking steps to increase their nuclear power capacities. Dual-purpose power and water-desalting projects were underway or planned in the U.S. Southwest, Israel, and the USSR. At Brookhaven National Laboratory, on Long Island, a new research reactor was brought into operation.

U.S. Power Installations. Public utilities in the United States have committed themselves to install nuclear facilities having a capacity of 2,500 megawatts of electricity (Mwe). This commitment represents more than 2.5 times the total installed U.S. nuclear power capacity at the end of 1965.

Florida Power and Light Company was among the companies planning large nuclear facilities. Its Turkey Key plant, under construction in 1965, is to start with a coal-fired capacity of 1,000 Mwe and increase the capacity to 3,000 Mwe by utilizing nuclear reactors. The first reactor will have a capacity in the 800- to 1,000-Mwe range and is scheduled to supply power in 1970.

The impressive record of the Yankee Atomic reactor, which went into operation in Massachusetts at the end of 1960, has led two other New England power groups to plan the installation of nuclear facilities. A group consisting of the Connecticut Light and Power Company, the Hartford Electric Light Company, and Western Massachusetts Electric Company, has announced plans for a 600-Mwe installation at Millston Point, Conn. The Central Vermont Public Service Company and the Green Mountain Power Co. are planning an installation in Vermont in the 350- to 450-Mwe range. The Connecticut and Vermont reactors are planned to begin operation in 1969.

France. The use of nuclear power in France has been expanding at a rapid rate. Since 1960, France has installed nuclear generating facilities totaling about 1,000 Mwe, which is comparable with installed U.S. capacity. For the next five-year period (1965–70), the government plans to build at least one gas-graphite 500-Mwe reactor each year. This corresponds to about one quarter of the estimated total new power facilities that will be installed in France during this period.

Britain. By far the greatest installed nuclear power capacity, a total of nearly 3,000 Mwe, exists in Britain. The combination of low capital costs for construction of new plants and the high cost of conventional fuels has made the use of nuclear power economic. Britain, like France and the United States, is rapidly becoming more dependent on nuclear power. The British government plans to install an additional 5,000 Mwe of nuclear power in the first half of the 1970's.

USSR. Articles in Soviet newspapers during 1965 revealed the existence of plans for building a chain of large atomic energy stations in European Russia. They would relieve the problem of transporting coal, oil, and natural gas to the western USSR from Siberia, where a disproportionate share of Russia's natural fuel resources are located. The main centers of Soviet industry and population are concentrated west of the Urals.

The Soviet Union announced that it has started construction of a BN-350 fast reactor, first described in 1958 at the Second Geneva Conference on the Peaceful Uses of Atomic Energy. The reactor will be used for both power and desalting purposes. The BN-350 is now under construction at Shevchenko, a town on the eastern shore of the Caspian Sea. Upon completion in 1968, the reactor is expected to power a desalting plant that will supply 10 million gallons of water per day.

Desalinization Projects. Acute water shortages in the United States and elsewhere led to very serious study of the economics of nuclear desalinization in 1965. The United States sponsored its first international symposium on water desalinization in Washington, D.C., October 3–9; 63 countries were represented. The purposes of this conference were to study means for alleviating domestic water shortages and to improve arid regions in developing countries. A highlight of the meeting was the signing of an agreement between the United States and Mexico to explore together the feasibility of a large-scale nuclear power and desalting plant to serve the region embracing the border areas of California, Arizona, Sonora, and Baja California. The International Atomic Energy Agency also was a party to the agreement.

In 1965 the United States was actively engaged in a desalinization project at Pelican Point, Calif. The project was at a preliminary design stage following a favorable feasibility study carried out in 1964 by the Bechtel Corporation for the Metropolitan Water District of Southern California (MWD). The preliminary design was being done by Bechtel for MWD in cooperation with the AEC and the Office of Saline Water (OSW) of the Department of the Interior. Besides the desalting facility to be built and operated by MWD, the project would supply power from reactors built and operated by utility companies.

This dual-purpose concept is attractive because the heat energy at the exit of the electricity-producing turbine generators can be used to evaporate fresh water from brine. The plant would supply 1,800 Mwe and 150 million gallons of water per day (mgd). The overall estimated cost of installation is $300 million. The preliminary estimates indicate that the cost of electric power will be three-tenths of a cent per kilowatt-hour, and the cost of water 22 cents per 1,000 gallons. Comparable costs of conventional fuels are estimated at four-tenths of a cent per kilowatt-hour and 28 cents per 1,000 gallons.

The timing and funding for the project will involve decisions by the government, private industry, and municipal utilities. The utilities involved are Southern California Edison, San Diego Gas and Electric, and the Los Angeles Department of Water and Power. They estimate that the need for power will require the plant to be in operation by 1971. This schedule allows ample time for the construction and operation of an evaporator module prototype to be set up by OSW at San Diego Gas and Electric's South Bay plant site.

A proposed desalting project in Israel was studied by two U.S. companies: Kaiser Engineering (nuclear aspects) and Catalytic Construction Company (desalting aspects). Their joint report calls for a plant to produce 200 Mwe and 100 mgd. Provisions in the design allow steam to be bypassed to the desalting facility when power demand is low, or for the generating plant to operate at full capacity when the water plant is shut down. The specifications call for a 1,250-Mwe light water reactor and a four-stage 25-mgd desalting plant. The initial operation is scheduled for 1971 and is contingent on the development of the same OSW evaporator module prototype as will be used for the Pelican Point plant. (See also CHEMISTRY; WATER SUPPLY.)

U.S. ATOMIC ENERGY COMMISSION

The U.S. Congress approved a $2.55 billion budget for AEC operations for the 1966 fiscal year. It cut some $350 million from the previous year's budget. The cut was not across the board, but reflected a reevaluation of priorities.

Projects. The project most seriously affected by the budget reduction was SNAP 50, which was cut from a requested $22 million to $12 million. The Congressional Joint Committee on Atomic Energy (JCAE) stated that the project was "in the classification of advanced technology . . . with no presently identifiable project-type objectives." The SNAP 50 project is concerned with developing a nuclear propulsion reactor for space vehicles and is under contract to the Connecticut Advanced Nuclear Engineering Laboratory of Pratt & Whitney Company. Because of the sharp reduction in funds, the project will be shifted from Pratt & Whitney to AEC's Livermore (Calif.) Radiation Laboratory.

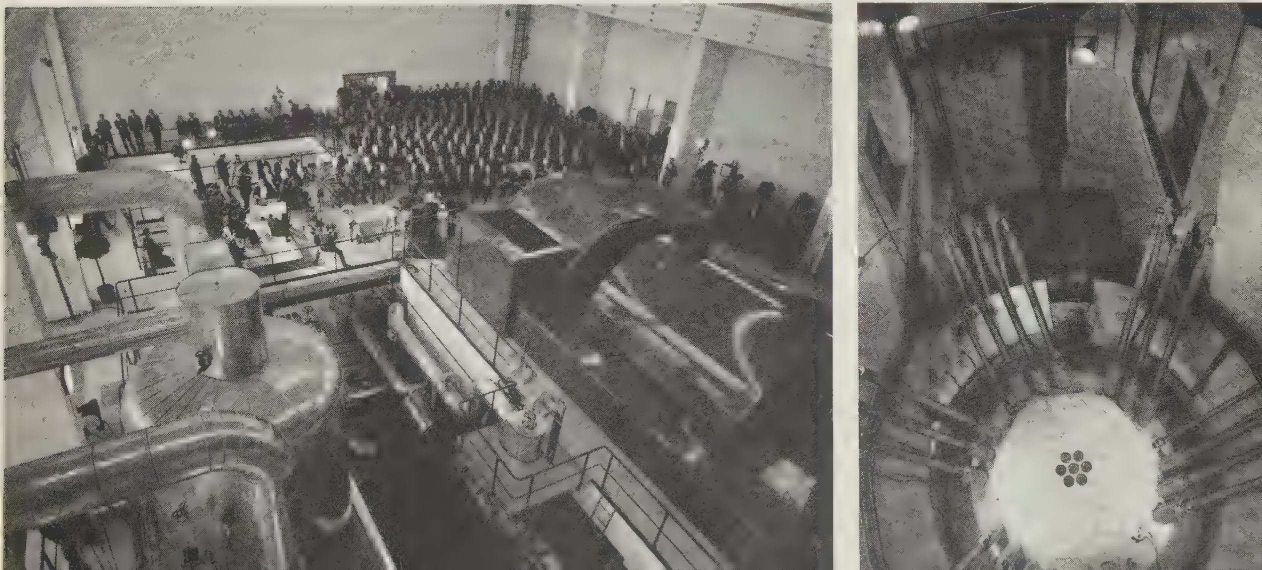
The JCAE added $1.1 million to an AEC request for $1.4 million to develop a nuclear-powered merchant ship. Here the JCAE found the commission lagging in what it considered a promising field.

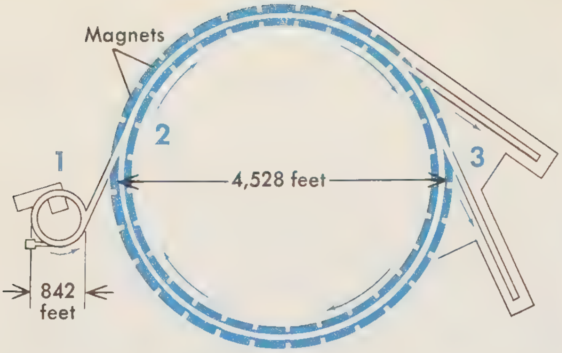
Research. On Oct. 31, 1965, scientists and engineers at Brookhaven National Laboratory brought their high-flux beam research reactor (HFBR) critical, that is, to its first self-sustaining nuclear chain reaction. The reactor was designed to provide the world's highest beam flux of neutrons. ("Flux" refers to the number of neutrons passing through a given area in a given length of time.) The reactor will be used primarily for research into the nature and structure of matter.

The HFBR is designed to operate at 40 Mw and is cooled, moderated, and surrounded by heavy water. It is fueled with 28 uranium-235 fuel ele-

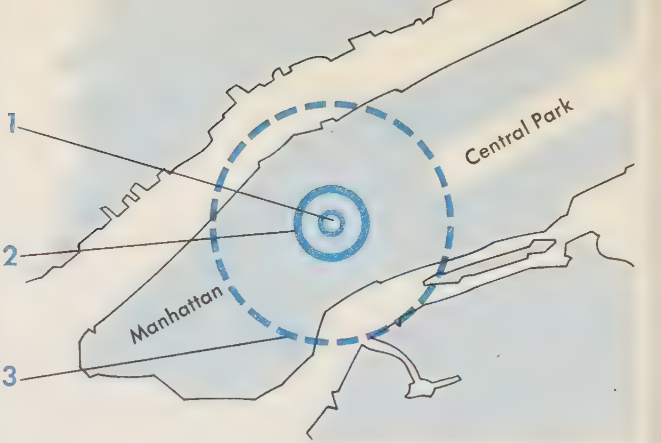
WORLD'S LARGEST HEAVY WATER REACTOR, completed at Karlsruhe Nuclear Research Center in West Germany, is inaugurated on November 22 during ceremony held in the turbine hall *(below, left)*. The reactor boiler is shown at the right.

PICTORIAL PARADE PHOTOS





A PROPOSED 200-BEV PROTON ACCELERATOR would be attached to Brookhaven National Laboratory's existing 33-Bev accelerator (1), which would inject high-energy protons into the new machine (2). They would be further accelerated up to 200 Bev and then shot into target areas (3) for experimentation. Protons are accelerated to smash the nuclei of atoms. The more they are accelerated, the more particles result from the collision. These particles are then analyzed, thus providing new knowledge of the atom.



ADAPTED FROM THE NEW YORK TIMES

COMPARATIVE SIZES of existing and proposed proton accelerators are shown above, superimposed on a map of Manhattan. The smallest circle (1) represents the 33-Bev machine (842 feet in diameter), the largest now in existence. The middle circle (2) shows the size of the proposed 200-Bev machine (4,528 feet in diameter). The largest circle (3) represents a proposed 1,000-Bev accelerator, which would have a diameter of 16,000 feet.

ments housed in the lower spherical portion of the reactor vessel. The entire reactor system is housed in a hemispherical containment building with an inside diameter of 176 feet. While the reactor is in operation, the building is maintained at a slight negative pressure to ensure that any air leakage is inward rather than outward. Access to the building is provided by an airlock system.

The first work on the HFBR began in 1956 with physics calculations by Brookhaven scientists to determine what reactor system would best meet the research needs of the laboratory. Preliminary engineering design was started in 1960, and construction was begun in the fall of 1961. The capital cost for construction of the HFBR is about $12.5 million.

Operations. The operating budget for physical research was up $25 million from the previous year, to $239 million, but the capital budget (plant and equipment) was down $64 million. The operating expense budget for civilian power reactors was reduced by $1 million. For recent programs, the JCAE urged "continual vigilance" by the AEC to "phase the government out of further developments or improvements of types of reactors which are commercially available." As in previous years, weapons work amounted to nearly half the total AEC budget.

Licensing Reform. Because of the increasing knowledge gained from operating nuclear power facilities and the increasing demand for new facilities to supply urban centers, the AEC asked the nuclear power industry to review the reactor licensing process. The average time consumed in processing construction permit applications has been one year. The industry believes that this time could be reduced to six months without sacrificing any safety controls. Its main recommendations were (1) that the primary safety analysis be done by the staff of AEC's director of regulation, and (2) that the three-man Atomic Safety and Licensing Boards confine themselves to accepting or rejecting this analysis and not attempt an independent technical review of reactor safety. A further recommendation was that the Advisory Committee of Reactor Safeguards (ACRS) should be relieved of its statutory mandate to review all license applications, while retaining the right to look into any project, and that it should spend most of its time on reactor safety.

High-Energy Physics Report. AEC's release of the study report *Policy for National Action in the Field of High-Energy Physics* touched off a debate in the scientific-political community. The disagreement concerned the proper government support of research in high-energy physics. The report, made at the request of the Congressional Joint Committee on Atomic Energy, recommended that funds be allotted for the design and construction of a 200 billion electron volt (Bev) accelerator starting in July 1966, and an 800-Bev machine building project beginning in July 1970. This two-step approach to obtaining higher-energy nuclear projectiles had been recommended in 1963 by a scientific committee headed by Professor Norman Ramsey of Harvard University.

The AEC report estimated that the 200-Bev machine would cost about $300 million to build and about $65 million a year to operate. The study recommended that a site be chosen to provide the greatest overall advantage to the government and the high-energy physics program. It specifically stated that the location of the group of scientists and engineers engaged in designing the machine should not necessarily determine the eventual construction site. As a result of this report, AEC solicited invitations from all interested parties for appropriate sites for the new machine.

SPACE AND MILITARY APPLICATIONS

The uses of nuclear devices for space and military applications increased rapidly in 1965.

SNAP Reactors. On April 3, SNAP 10-A became the first nuclear reactor to be orbited in space (in the Snapshot satellite). It supplied 565 watts of electric power, at 28.5 volts DC, by means of a thermoelectric generator. The energy source was a small nuclear reactor cooled by liquid sodium-potassium and operated at a power level of 41 kw. The reactor proper was about the size of a 5-gallon tank and weighed 210 pounds. The entire package was just under 1,000 pounds. The system was designed to operate in space for one year. However, after a perfect launch and reactor startup by command signal from the ground, the reactor suddenly shut itself down after operating for 43 days.

A promising nuclear method for obtaining auxiliary power for space applications is the use of radioactive isotopes as a source of power. SNAP 10-A's power-to-weight ratio was 0.5 watt per pound, compared with 2 watts per pound for isotope generators in the 100-watt power range. The first isotopic generators used the beta-emitting strontium-90 as a power source. However, they were not well suited for space application because of their low power density, which indicates that large weights must be used. The isotopic generators now used for space application contain curium-242 or plutonium-238; the latter appears to provide the best present-day source of energy.

A device powered by plutonium-238 was used in the Navy's Transit satellite, launched in 1964. It failed to go into orbit, causing great concern at that time over the 17,000 curies of plutonium-238 contained in the source. Had it fallen back to earth, it might have created a major radioactive hazard. Results of air-sampling studies released in 1965 showed that the plutonium burned up at reentry, at an altitude of about 120,000 feet, and that it is descending on a large area of the earth's surface over a period of years, but is not creating an appreciable hazard. The first American astronauts to land on the moon will carry 50-watt plutonium-238 SNAP's that will be used to supply power for remote lunar experiments.

A third method for obtaining auxiliary power is to couple a small reactor to a turbogenerator. This was the system used for SNAP 50, the project that was downgraded by Congress in 1965.

Nuclear-Powered Rocket Engines. The use of nuclear-powered engines for space propulsion falls into two classes: (1) to provide large initial thrust for short periods (on takeoff); and (2) to provide minute thrusts over long periods of time for space travel. Both projects are being actively pursued.

The Rover reactor rocket project made a comeback after having nearly been shut down in 1963 because of reactor core-material failure at very high temperatures. The rocket, which uses hydrogen heated in the reactor as a propellant, has been tested on the ground for 16.5 minutes at the full design power of 1,000 Mw. The specifications require that the reactor operate for one hour. Upon successful development, Rover rockets are expected to be used in systems developing 250,000 pounds of thrust, as upper stages of large chemical boosters.

Low-thrust rockets will be needed for maneuvering space vehicles once they escape the gravitational fields of the planets. Thrust of about 0.005 to 0.5 pound is useful for these purposes and can be supplied from the emission of alpha or beta rays from radioactive samples. A low-thrust rocket system using polonium as a source was proposed and developed by the former Space Technology Laboratory under the project name of Poodle. A unit was tested in a simulated space environment and produced a thrust of about 0.003 pound over a 65-hour period. (See also SPACE EXPLORATION.)

Nuclear Weapons. The United States and USSR continued underground testing of nuclear weapons throughout 1965. The United States exploded an 80-kiloton hydrogen bomb in the Aleutian Islands (Alaska) on October 29 to produce data for monitoring any future ban on underground testing. A Soviet underground nuclear explosion that took place on October 8 in Central Asia was detected at the new U.S. seismic station in Montana, dedicated on October 12. The station had been built under Project Vela to help solve the problem of detecting underground nuclear blasts and distinguishing them from earthquakes. These technical problems stand in the way of negotiating an effective complete ban on nuclear tests.

The two atomic powers that refused to sign the limited nuclear test ban treaty of 1963 made progress in 1965 in developing their small nuclear forces. Communist China exploded its second uranium-fueled atomic bomb on May 14. The AEC said the bomb was somewhat larger than the 20-kiloton device tested by the Chinese in 1964. France announced on July 12 that it had put an improved atomic bomb into production. The new bomb is believed to be smaller but more powerful than the 40-kiloton device produced since 1963 for delivery by Mirage 4 jet bombers.

On December 2, 1965, the U.S. aircraft carrier *Enterprise* became the first nuclear-powered ship to enter combat. The carrier launched air strikes against targets in South Vietnam.

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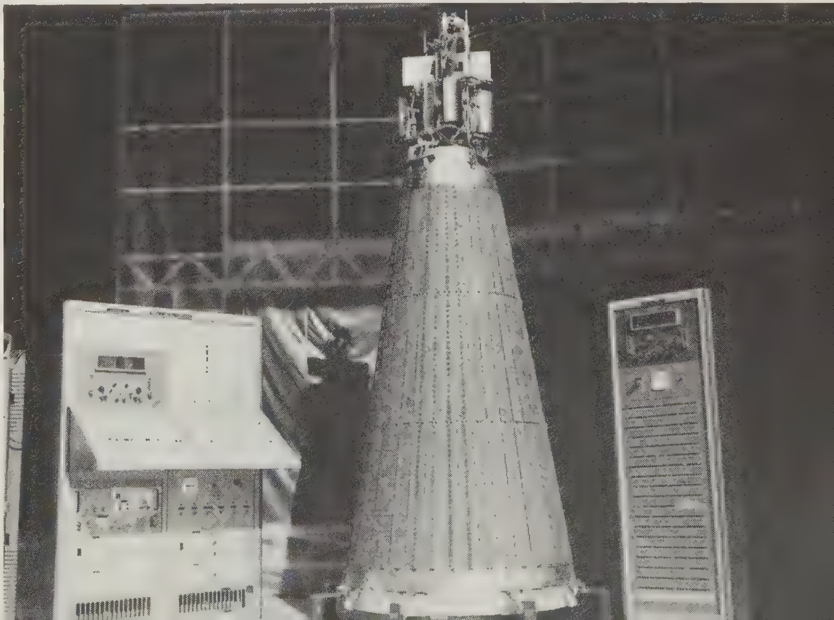
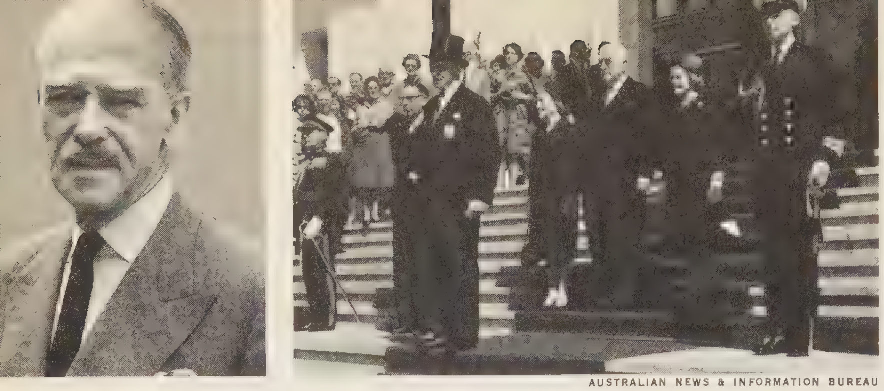
Brookhaven National Laboratory

MISSILES AND ROCKETS



NUCLEAR-POWERED THRUST for space vehicles is provided by SNAP 10-A, which was successfully tested in 700-mile-high orbit in 1965. Ground-test model (center) is flanked by control console and testing equipment. Reactor containing 10.5 pounds of uranium-235 is in small tank at top. SNAP's "skirt" consists of 2,880 pellets of germanium-silicon, which are heated by atomic fission and generate up to 565 watts of electricity. SNAP 10-A, launched on April 3, 1965, was designed to orbit earth for a period of 3,500 years, by which time its U-235 will have decayed.



AUSTRALIAN NEWS & INFORMATION BUREAU

NEW GOVERNOR-GENERAL of Australia, Lord Casey (*portrait at left*), was sworn in at ceremonies on the steps of the Federal Parliament House in Canberra on Sept. 22, 1965. Standing directly behind Lord Casey are (l. to r.) Lady Casey, Prime Minister Robert Menzies, and Dame Pattie Menzies.

AUSTRALIA

The Australian government took stronger action in support of South Vietnam and Malaysia during 1965. Australia made greater use of its combat troops in both countries, and also stepped up other types of aid. Increased defense spending led to higher taxation and a worsening of the unfavorable balance of overseas trade that had developed in late 1964.

Involvement in Vietnam. In February 1965 the Australian government announced that it would send an additional 17 military instructors to Vietnam, increasing its total there to 100. Other aid included a shipload of corrugated iron, an engineering team to build a water supply system and roads at Bien Hoa, and 100,000 Vietnamese language textbooks for use in primary schools. Australia supported the United States policy of bombing targets in North Vietnam, and Prime Minister Sir Robert Menzies warned there could be no negotiation without assurance of a genuine cease-fire and the ending of subversion in South Vietnam.

In May, Menzies stated that Australia had agreed to South Vietnam's request for more military aid and would send an 800-man infantry battalion. Three months later the government decided to send 350 additional supporting troops, comprising artillery, engineer, armored, signal, light aircraft, and supply groups. While in London for the June meeting of Commonwealth prime ministers, Menzies declared, "We are at war, make no mistake about it." He disagreed with several Commonwealth prime ministers on the possibility of negotiating an end to the war in Vietnam.

Involvement in Malaysia. Following Indonesia's withdrawal from the United Nations on January 21, Malaysians and Australians feared that Indonesia would step up its campaign to "crush Malaysia." The Australian minister for defense, Shane D. Paltridge, toured Malaysia to assess the need for increased aid. In February he announced that Australia would send an infantry battalion to serve with Malaysian and British units in Malaysian Borneo against the threat of an Indonesian attack. As a conciliatory gesture, the Australian minister for external affairs, Paul M.C. Hasluck, noted that Indonesia had stated that it still supported United Nations principles and added that Australia would continue a limited program of aid to Indonesia. Prime Minister Menzies said that Indonesia appeared to be interested in damaging Malaysian morale

AUSTRALIA · Information Highlights

Area: 2,971,081 square miles.
Population: 11,313,000 (Mar. 31, 1965 est.).
Chief Cities (1963 est. for metropolitan areas): Canberra, the capital (1964 municipal census), 77,466; Sydney, 2,256,110; Melbourne, 2,003,100; Brisbane, 649,500; Adelaide, 600,200; Perth, 445,000; Newcastle, 215,950.
Government: *Governor General*—Lord Richard Gardiner Casey (appointed July 29, 1965). *Prime Minister*—Sir Robert Gordon Menzies (took office Dec. 19, 1949; also was prime minister in 1939–41). *Parliament*—House of Representatives, 124 members (party seating, 1965: Liberal and Country coalition, 72; Labour, 52); Senate, 60 members (party seating, 1965: Liberal and Country coalition, 30; Labour, 27; Democratic Labour, 2; independent, 1).
Religious Faiths: Protestants, 67% of population; Roman Catholics, 21%; Jews, 1%; others, 11%.
Education: *Literacy rate*, 99% of population (excluding aborigines). *Total school enrollment* (1961)—2,379,086 (primary, 1,586,009; secondary, 601,692; technical, 103,600; higher, 87,785).
Finance (1964): *Revenues*, $2,482,816,000; *expenditures*, $3,097,920,000; *monetary units* (1966), Australian pound (0.4464 pound equals U.S.$1); Australian dollar (0.8929 dollar equals U.S.$1).
Gross National Product (1964): $19,219,200,000.
National Income: (1964): $15,659,840; average annual income per person, $1,390.
Economic Indexes: *Industrial production* (1963), 131 (1958=100); *agricultural production* (1964), 138 (1956–57=100); *cost of living* (1964), 111 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 5,083,000; cement, 3,626,000; sugar, 1,982,000; meat, 1,711,200; wheat flour, 1,512,000; aluminum, 80,292; wool yarn, 23,640.
Crops (metric tons, 1964–65 crop year): Wool, greasy (1963), 808,300 (ranks 1st among world producers); wheat, 9,525,000 (world rank, 6th); oats, 1,415,000 (world rank, 7th); barley, 907,000; grapes, 569,000; potatoes, 483,000; citrus fruits, 229,000; maize, 173,000.
Minerals (metric tons, 1964): Iron ore, 6,309,000 (ranks 17th among world producers); gypsum, 780,000 (world rank, 12th); salt, 592,000 (world rank, 20th); lead, 380,881 (world rank, 1st); zinc, 351,399 (world rank, 4th); silver, 18,275,000 troy ounces (world rank, 6th); gold, 963,300 troy ounces (world rank, 5th); bituminous coal, 27,794,000; lignite, 19,330,000.
Foreign Trade (1964): *Exports*, $3,040,000,000 (chief exports: wool, $1,006,000,000; wheat, $408,000,000); *imports*, $3,315,000,000 (chief imports, 1963: nonelectrical machinery, $371,000,000; transport equipment, $294,000,000; textile yarn and fabrics, $236,000,000). *Chief trading partners* (1963): Britain (took 19% of exports, supplied 30% of imports); U.S. (took 12% of exports, supplied 21% of imports); Japan (took 16% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 535,036 miles (70,362 paved); *motor vehicles* (1964), 3,378,074 (automobiles, 2,546,533); *railways* (1963), 25,497 miles; *merchant vessels* (1964) 103 (515,000 gross registered tons); *principal airports*, Adelaide, Brisbane, Canberra, Melbourne, Perth, Sydney.
Communications: *Telephones* (1964): 2,522,522; *television stations* (1964), 47; *television sets* (1964) 2,000,000; *radios* (1963), 2,238,000; *newspapers* (1962), 58 (daily circulation, 4,011,000).

rather than starting an all-out war. He pointed out that Australia was "willing to be friendly" but was pledged to support Malaysia's "territorial integrity and independence."

After the failure of the attempted coup to oust Indonesian President Sukarno (September 30–October 1), Australia's Foreign Minister Hasluck welcomed the "growing anti-Communist sentiment in Indonesia." With the support of the leader of the Labour opposition, he expressed the hope that Indonesia would concentrate on solving its domestic problems and promised Australian assistance for Indonesia's economic development.

Defense Program. Australia's military commitments to Malaysia and South Vietnam convinced the government of the need to build up defenses, and the first peacetime conscription for overseas military service went into effect in January, when registration began. Starting in July, men who had reached the age of 20 during the first six months of 1965 were called up on the basis of a random drawing of birth dates. A total of 4,200 men were inducted during the last six months of 1965, and the government announced that 2,100 men would be drafted during each quarter of 1966.

As part of its 3-year defense program (1965–67), the government concluded an agreement with the United States to purchase military equipment costing about $360,000,000. The package included 3 missile-equipped destroyers, 24 F-111-A aircraft, and a wide range of other aircraft and advanced weapons. Other military expansion included the construction of additional training facilities for the enlarged army and the purchase of 110 supersonic Mirage jet fighters built in Australia.

Economy. Although the gross national product showed a 9% increase in fiscal year 1965, as it had in the previous fiscal year, there were signs of difficulty. Economic problems included a 22% increase in imports, a 5.4% drop in exports, a tightening of both domestic and overseas markets for government borrowing, and a balance of payments deficit 15 times above that of the preceding year. Meat exports to the United States fell by 60%. Wool production reached a record high, but an extended drought was expected to reduce total production for the marketing year 1965–66.

Broken Hill Proprietary, one of the private companies reporting record profits, opened a new steelworks in South Australia. Japanese steel companies agreed to purchase more than $4 billion in iron ore from Western Australian companies over an extended period of years, but shipments were not to begin until after 1965.

In March the Reserve Bank of Australia introduced two measures to tighten credit. Interest rates on overdrafts and deposits with the trading banks were increased by 0.25 to 0.50%, and there were similar increases for deposits and loans of the savings banks.

Government Finance. The federal budget for 1965–66 provided for expenditures more than 10% greater than in 1964–65, including a 27% boost for defense and a 12.6% raise in payments to the states. The budget anticipates a small surplus based on added revenues from a 2.5% increase in personal income tax rates and substantial tax raises on gasoline, alcoholic beverages, and tobacco. The Labour opposition argued that the budget imposed tax increases only on wage earners, provided meager social service gains, and failed to deal with the problems of excessive imports and reliance on foreign capital.

Decimal Currency. The government announced new details of the change to a decimal currency system, scheduled to go into effect on "C-day," Feb. 14, 1966. Banks were to close for four days, starting February 9, to allow time for converting their operations to the new system. All government and banking operations were to have made the change by C-day, but private businesses have up to two years to adopt the new system. Both old and new currency will circulate during the two-year period.

The Decimal Currency Board announced that 600,000,000 new coins will be available by C-day. In addition, 22 new postage stamps will be introduced, and a change in the basic stamp price from 5 pence to 4 cents will reduce the cost by 0.2 pence. The new dollar, equivalent in value to the present Australian 10 shilling note, is worth U.S.$1.12 at the 1965 exchange rate.

Elections. The Australian High Court ordered a recount of votes cast in Victoria for the federal Senate seat in the election held on Dec. 5, 1964. The recount, tallied on Feb. 9, 1965, gave the undecided seat to the Democratic Labour party. As a result, the Menzies government lost its majority in the new Senate, which convened on Aug. 17, 1965. The new lineup in the Senate was 30 seats for the Liberal and Country party coalition, 27 for the Australian Labour party, 2 for the Democratic Labour party, and 1 independent.

In state elections held in 1965, the Liberal and Country party coalition was reelected to power in Western Australia, and the same coalition defeated the Labour party in New South Wales for the first time in 24 years. However, in South Australia, the Labour party defeated the Liberal and Country League for the first time in 32 years.

New Governor-General. On July 29, 1965, Queen Elizabeth II approved the appointment of Lord Richard Gardiner Casey as the 16th governor-general of Australia. He replaced Viscount de L' Isle, governor-general from 1961, who retired in May.

RUSSELL H. BARRETT
Professor of Political Science
University of Mississippi

AUSTRALIAN COMBAT TROOPS are greeted by Vietnamese girls on June 16, after their arrival in Saigon to join the allied war effort against the Vietcong insurgents.

WIDE WORLD

EUROPE
PATAKY

AUSTRIAN STUDENTS honor the 600th anniversary of the founding of the University of Vienna in May 1965. In its long history the university has graduated more than half a million students and has awarded more than 72,000 doctorates. The enrollment is more than 12,000, one third coming from outside Austria.

AUSTRIAN INFORMATION SERVICE, NEW YORK, N.Y.

AUSTRIA

The election of a new president, following the death of President Adolf Schärf, the resignation of the cabinet, and the celebration of the 10th anniversary of the signing of the Austrian State Treaty were the most important political events of 1965 in Austria. There were also other notable anniversaries to commemorate.

Presidential Election. Scholarly Adolf Schärf (1890–1965), president of Austria since 1957, died on February 28. When the election for his successor took place on May 23, Franz Jonas, the Socialist mayor of Vienna, defeated former Chancellor Alfons Gorbach, of the conservative People's party, by 2,324,474 votes (50.7%) to 2,260,992 (49.3%); 94,095 ballots (2.1%) were invalid. The new president was sworn into office on June 9, for a six-year term.

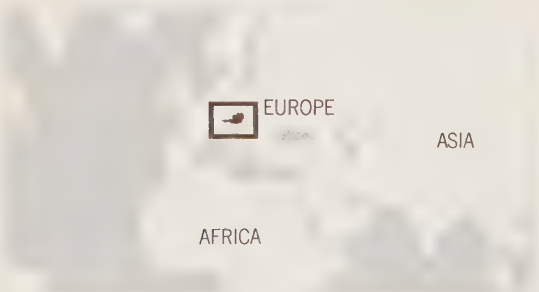
Death of Leopold Figl. Death claimed another leading Austrian statesman when Leopold Figl (1902–65) died on May 9. He had been chancellor of Austria from 1945 to 1953, foreign minister from 1953 to 1959, president of Parliament from 1952 to 1962, and governor of Lower Austria from 1962 to 1965. He was largely responsible for the conclusion of negotiations with the Soviet Union that made possible the Austrian State Treaty on May 15, 1955. (For biographical sketches of Schärf and Figl, see NECROLOGY.)

Anniversaries. The official ceremonies in Belvedere Castle on May 15 in commemoration of the 10th anniversary of the State Treaty of 1955 were attended by the foreign ministers of the USSR, Britain, France, and the United States, representing their predecessors who signed the treaty in that palace. Austria also marked with appropriate ceremonies and exhibitions the 20th anniversary of the Republic (April 20), the 600th anniversary of the founding of the University of Vienna (May 9–15), and the 150th anniversary of the signing of the Treaty of Vienna June 9.

Political Affairs. On March 31, Parliament approved a revision of the Criminal Code designed to permit further prosecution of war criminals. This was a reversion to Austrian law as it existed before 1950, when the crime of murder did not come under the statute of limitations.

On October 22 the cabinet of Chancellor Joseph Klaus, a coalition of Socialists and People's party members, resigned because of a disagreement over

AUSTRIA · Information Highlights



Area: 32,374 square miles.
Population: 7,237,000 (Dec. 31, 1964 est.).
Chief Cities (1963 est.): Vienna, the capital, 1,634,253; Graz, 243,500; Linz, 200,415; Salzburg, 112,662; Innsbruck, 107,454.
Government: *President*—Franz Jonas; *Chancellor*—Josef Klaus; *Parliament*—National Parliament (165 members); party seating (1965)—People's party, 81; Socialists, 75; Freedom party, 8; Independent, 1.
Religious Faiths: Roman Catholics, 90% of population; Protestants, 6%; others, 4%.
Education: *Literacy rate*—98% of population. *Total school enrollment* (1962)—1,080,169 (primary, 725,475; secondary, 78,169; teacher-training, 8,345; technical, 222,518; higher, 45,662).
Finance (1964): *Revenues*, $2,257,000,000; *expenditures*, $2,332,000,000; *public debt*, $1,029,000,000; *monetary unit*, schilling (25.87 schillings equal U.S.$1).
Gross National Product (1964): $8,504,000,000.
National Income (1964): $6,494,000,000; average annual income per person, $900.
Economic Indexes (1964): *Industrial production*, 141 (1958=100); *agricultural production*, 134 (1956–57=100); cost of living, 119 (1958=100).
Manufacturing: (metric tons, 1964): Cement, 3,769,000; crude steel, 3,192,000; meat, 320,400; wheat flour, 363,600; sugar, 333,000; wine, 256,000; aluminum, 77,696.
Crops (metric tons, 1964): Potatoes, 3,438,000 (ranks 13th among world producers); sugar beets, 1,997,000 (world rank, 18th); rye, 388,000 (world rank, 10th); wheat, 751,000; barley, 605,000; grapes, 364,000; oats, 327,000; maize, 212,000.
Minerals (metric tons, 1964): Graphite, 102,236 (ranks 2nd among world producers); gypsum, 568,000 (world rank, 16th); natural gas (1963), 63,406,000,000 cubic feet (world rank, 13th); iron ore, 3,563,000; crude petroleum (1963), 18,271,000 barrels; salt, 392,000; bauxite, 4,100.
Foreign Trade (1964): *Exports*, $1,446,000,000 (chief exports, 1963: iron and steel, $194,453,000; conifer lumber, $115,000,000; textile yarn and fabrics, $107,109,000; cattle, $38,768,000); *imports*, $1,863,000,000 (chief imports, 1963: passenger cars, $101,511,000; coal, $66,193,000; iron and steel, $49,378,000). *Chief trading partners* (1963): West Germany (took 26% of exports, supplied 41% of imports); Italy (took 17% of exports, supplied 8% of imports); Switzerland (took 7% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 20,645 miles (11,739 paved); *motor vehicles* (1964), 733,323 (automobiles, 641,606); *railways* (1963), 4,005 miles; *national airline*, Austrian Air Lines; *principal airports*, Graz, Innsbruck, Klagenfurt, Linz, Salzburg, Vienna.
Communications: *Telephones* (1964): 866,275; *television stations* (1964), 14; *television sets* (1964), 485,000; *radios* (1963), 2,110,000; *newspapers* (1963), 37 (daily circulation, 1,751,000).

FRANZ JONAS, a Socialist, was elected president of Austria on May 23, 1965, defeating the candidate of the conservative People's party in a campaign that introduced American political styles to the country. Both candidates were photographed more and traveled farther than in any preceding contest. The conservative, Alfons Gorbach, campaigned by helicopter, but Jonas did not fly and covered less ground than his opponent. In a victory speech he told supporters, "Now you can sleep quietly for the next six years."

Jonas was born in a working-class district of Vienna on Oct. 4, 1899. After serving in the Austrian Army in World War I, he became a linotype operator by trade and a Socialist in politics. By 1932 he had become secretary of a section of the Socialist party in Vienna. Following World War II he entered city politics and continued to advance in the Socialist party. He first served as mayor of a district of Vienna, then held posts in the city government, and was mayor and provincial governor of Vienna from 1951 to 1965.

PHOTO SIMONIS

the next year's budget. President Jonas announced that elections would be held in the spring of 1966. Chancellor Klaus was asked to head a caretaker government until the time of the elections.

Economic Development. The Austrian economy showed vigorous expansion in 1964, with the fastest rate of growth since 1960. Agriculture produced record yields in practically all crops. The gross national product was nominally up 9.8%, but after being adjusted to changes in price levels the increase was 6%, as compared with 4.4% in 1963. Preliminary quarterly figures indicated a slower rise in the gross national product for 1965.

The monthly average of employed workers stood at 2,363,000, an increase of 21,700 over the 1963 average. Austria has the highest percentage of employed women in western Europe—36 per 100, as compared with 23 per 100 in Italy and 33 per 100 in West Germany. The government set an admission quota of 45,000 foreign workers in 1965, compared with 36,000 in 1964.

Foreign Affairs. Austria's prolonged negotiations (March 18–June 25) with the European Economic Community (EEC) led to a rapprochement of views but no concrete results. Austria's suggestion that she be permitted to retain membership in the European Free Trade Association (EFTA) while joining EEC was not accepted by the Common Market states. In 1964, 59% of Austria's imports came from EEC states and 48% of her exports went to them.

Differences with Italy over South Tyrol remained quiescent during the year. Rumania ratified on March 29 an agreement to pay Austria $1.5 million as settlement for goods of Austrian nationals confiscated by Rumania during and after World War II. A five-year Austro-Rumanian trade agreement, effective Jan. 1, 1966, calls for mutual minimum increases of 25% in the volume of goods exchanged. Agreements primarily covering legal matters, signed with Hungary on April 9, were expected to improve relations between the countries.

Austria has contributed medical and police detachments to the UN peace-keeping force in Cyprus. On March 8, Austria joined the Development Assistance Committee of OECD, the Organization for Economic Cooperation and Development. An important part of the Austrian aid program consists of contributions to multilateral agencies. However, Austria has undertaken its own limited projects in some 20 countries. In addition, an ambitious educational effort provides that nearly 5,000 students from underdeveloped countries can study at Austrian universities.

E.C. HELMREICH
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AUTOMATION

Computer technology's most spectacular achievement in 1965 was the transmission of close-up photographs of Mars by the space vehicle, Mariner 4. Still pictures of the planet were scanned by Mariner 4's small computer unit and broken into 64 shades of gray. Each shade was numbered for transmission in sequence across 135 million miles of space to tracking stations on earth. Transmission of the first picture took 8 hours, and 21 pictures were transmitted over a period of 9 days. After being received, the numbers were fed into other computers and converted again into the various gray shades to reconstitute a picture, in much the same way that tiny dots form a picture in a halftone engraving. (See also SPACE EXPLORATION.)

Compressing the Circuitry. Such striking developments as the photographing of Mars were furthered by advances in microminiaturization, a technique for compressing electronic circuitry into very small spaces. IBM's new 360 computer system utilizes tiny transistors to provide the necessary integrated circuitry. As microelectronics permits complete electronic functions to be performed by a small module or package, calculating devices that might require from 4,000 to 5,000 conventional components can be built with only 40 to 50 metal oxide semiconductors. Small memory cells developed during the year enabled computers to solve different problems at the same time. Memory cells are able to store as many as 40 million items.

Proposed New Applications. It was evident that the extraordinary uses to which computers could be put required an equally extraordinary technology. Army scientists were seeking adaptive computers that would distinguish a dud from a warhead. Such devices would draw on a wide range of "experience" in solving problems, in effect "learning" how to meet new situations.

Other devices were being developed to read handwriting and handprinting, bringing closer the time when computers, without human supervision, would scan income tax returns or appraise weather maps for forecasting. Typewriter devices hooked into computers would allow typists to retrieve data from a computer's memory to change a word or an entire paragraph in previously prepared documents without having to retype the page. The automobile industry was experimenting with computer-generated video displays to speed up the design cycle for new cars.

Industrial process controls represent perhaps the most important area for the expansion of computer technology. While there are now only about 500 process control computers in existence, equipment manufacturers expect that some 4,000 will have been installed by 1970. The RAND Corporation, a nonprofit, private corporation that conducts studies for many government agencies, predicted a tenfold increase in capital investment in these devices during the decade from 1970 to 1980. Process control computers are used in iron foundries, electric generating stations, textile finishing plants, and oil and chemical refineries. The steel industry, thus far somewhat hesitant to use the new control mechanisms, has begun to install process control computers, making it possible to integrate basic oxygen furnaces, continuous casting, and automatic rolling mills.

Not only does a control computer increase efficiency, but it is able to put together information speedily enough to correct production line vagaries before they develop. Several digital control systems might be linked to a central data processing computer to yield inventory and marketing information that might be quickly related to production data.

Rising Investment. Investment in automated equipment has continued to grow, and in 1965 it registered an estimated 12% increase over 1964. Total investment was valued at about $10 billion, out of $48 billion in total outlays on plant and equipment. Data processors accounted for more than $1 billion, electronic control devices for $350 million, and process control computers for $125 million. The remaining $8.5 billion was spent on machine tools, materials handling equipment, instrumentation, motors, rectifiers, and other electrical devices, and pneumatic and hydraulic servomechanisms and other control machines.

Meeting the Challenge of Automation. Although continued growth in the economy in 1965 provided jobs to offset those lost to automation, job expansion occurred mainly in areas to which blue collar workers could adapt with difficulty—state and local government, services, and specialized occupations. Experts in business, labor, and government were hopeful that adjustments could be made without too much hardship. However, agreement was lacking on what were the real effects of automation, as evidenced by the views expressed at a national conference on automation sponsored by the American Bankers Association in San Francisco in March 1965. Thomas J. Watson, Jr., head of International Business Machines, warned at the conference that while automation was proceeding at "express train speed," its social and economic consequences remained at best unknown and at worst entirely controversial.

A good deal of recent federal legislation on manpower and training has sought to counteract what are thought to be the effects of automation. Government interest began with the 1955 hearings on automation by the Joint Economic Committee, which warned that its impact would have to be watched carefully. In 1962 the President's Committee on Labor-Management Policy issued a statement echoing the earlier concern. The Area Redevelopment Act of 1961 provided loans and grants to communities affected by technological change. In 1965 a new law provided more than $1 billion in aid to the 11-state Appalachian region. Active manpower policies and improvement of state employment services were undertaken to match men and jobs.

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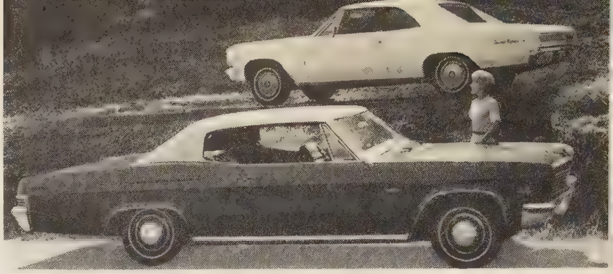
AUTOMOBILE RACING. See SPORTS.



CHEVROLET offered 50 models in 1966, including the Caprice Custom and the Chevelle Super Sport 396 (*top*).

OLDSMOBILE TORONADO, with the only U.S. front-wheel drive, keeps rear of chassis free of power-train components.

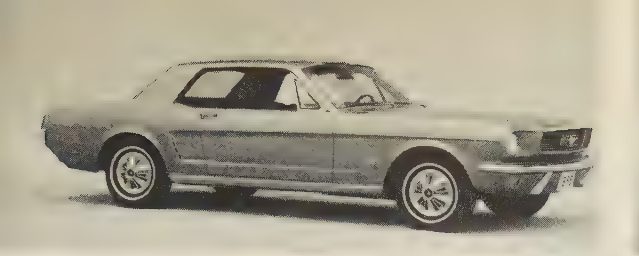
AUTOMOBILES

The United States automobile industry accelerated its production pace in the 1965 model year, to manufacture a record 8,850,213 passenger cars. This total exceeded by nearly one million units the previous peak of 7,880,845 attained in the 1964 model year. For the 1966 model selling season that began at the end of September 1965, domestic manufacturers offered a postwar record number of 364 passenger models—21 more than in the 1965 season.

1965 MODEL PRODUCTION

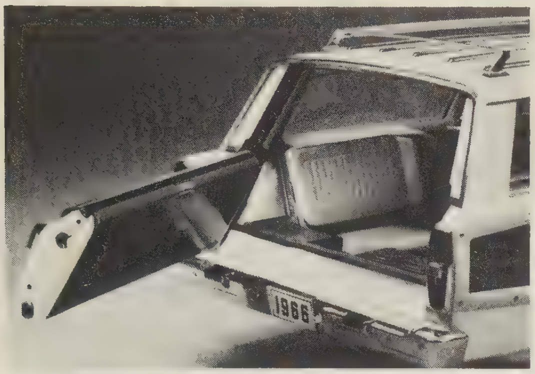
The unsurpassed consumer demand for new cars led to a 12.3% year-to-year rise in 1965 model production, compared with a 6.1% rise for 1964 models. The increase in automobile production was achieved despite a six-week strike in General Motors plants and a four-week strike in Ford Motor Co. plants in 1964, soon after 1965 model output began.

The output of 1965 models was divided as follows among the four major U.S. builders: *General Motors,*

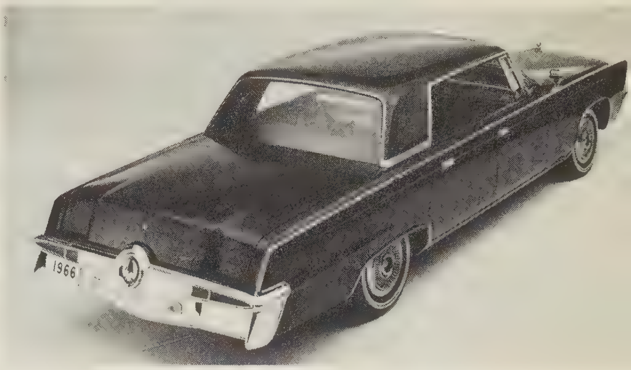


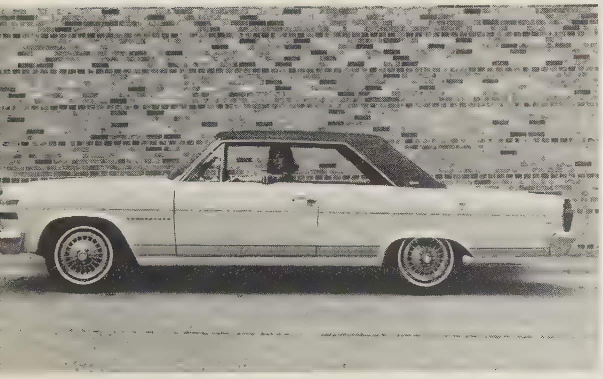
FORD'S MUSTANG (*left*) kept up fast sales pace in 1965; Falcon (*right*) shows Mustang styling influence.

FORD station wagons introduced a tailgate that either can be let down conventionally, or swung open like a door.



IMPERIAL, Chrysler Corporation's car in the top price field, presented a distinctive styling in its rear bumper.





AMBASSADOR DPL HARDTOP (*left*), an all-new American Motors model with a crisp roof line, and the Dodge Dart GT convertible (*right*) presented a sporty look.

4,560,061 (51.5% of total output); *Ford Motor Company*, 2,451,207 (27.7%); *Chrysler Corporation*, 1,441,198 (16.3%); and *American Motors*, 391,336 (4.4%). In addition, Checker Motors built 6,381 cars in the same period. Studebaker built no cars in the United States during 1965. Its assembly headquarters were moved to Hamilton, Ont., in December 1963.

General Motors' share of production of the 1965 models was slightly lower than its 54.1% of the 1964 models, partly as a result of the strike, but also because the company offered no direct competition to the Ford Mustang, which scored the biggest gain of any model. The compact, sporty Mustang soared from 121,538 in 1964 (1.5% of the industry total for its first year in production) to 559,460 in 1965 (6.3% of the total). Only the regular Chevrolet and Ford series outproduced Mustang in the 1965 model year.

The higher-priced intermediate and full-size 1965 models gained increased shares of retail sales. Except for the Mustang, the sale of compacts slipped. Chevrolet's Chevy II, Ford's Falcon and Fairlane, Plymouth's Valiant, and Rambler's American suffered sharp volume declines.

U.S. PASSENGER CAR PRODUCTION, 1964–65

Company and model	1964 (Jan.–Sept.)	1965 (Jan.–Sept.)
American Motors Corp.		
Rambler	268,736	242,201
Chrysler Corp.	836,039	1,031,477
Plymouth	373,614	483,239
Dodge	350,851	388,377
Chrysler	98,234	149,249
Imperial	13,340	10,612
Ford Motor Company	1,603,399	1,855,312
Ford	1,347,454	1,576,294
Mercury	232,456	254,237
Lincoln	23,489	24,781
General Motors Corp	3,109,906	3,611,946
Chevrolet	1,679,842	1,895,114
Pontiac	541,691	631,216
Oldsmobile	397,445	467,328
Buick	372,933	478,197
Cadillac	117,995	140,091
Checker Motors	5,045	4,611
Total U.S. production	5,823,702	6,745,547

Source: Automobile Manufacturers Association.

Gains among the costliest models within lines were particularly impressive for Rambler's Ambassador, Plymouth's Fury, Dodge's Polara, and Mercury's Montclair and Park Lane. Other big gains were registered by three of General Motors' enlarged intermediate models—Buick Special, Oldsmobile F-85, and Pontiac Tempest. At the very top of the 1965 model price ladder, Cadillac put out 181,435 cars, surpassing the combined total of its four principal competitors—Buick Riviera, Ford Thunderbird, Imperial, and Lincoln. Lincoln gained in production, to 40,180, but the others declined, to 74,972 for Thunderbird, 34,586 for Riviera, and 18,399 for Imperial.

THE 1966 MODELS

General Motors offered a total of 171 models for the 1966 model year; Chrysler, 87; Ford, 80, and American Motors, 26. Within the model lineup, the major trend was an increase in the number of intermediate offerings at the expense of compacts. For instance, the Mercury Comet was lengthened to intermediate size.

Styling. Raised or "hippy" rear fenders, first introduced on the 1962 Pontiac Grand Prix, spread throughout all models in subsequent years and finally became standard in 1966. There was also a movement toward fastback design on specialty sports models.

The most unusual new offering for 1966—the front-wheel-drive Oldsmobile Toronado—was a true fastback. The Toronado featured Italian design lines. Its front-wheel drive, in which the drive mechanism is housed with the engine at the front of the car, had not been available on an American-make automobile since the Cord of the mid-1930's. Front-wheel drive has been offered, however, on numerous European makes, including Citroën, Saab, Lancia, and Taunus. General Motors held the distinction of having the only American-made cars with a front engine and front transmission (Toronado), and with a rear engine and rear transmission (Corvair). Other newly introduced U.S. fastback cars included American's Marlin, the Plymouth Barracuda, and a model of the Mustang. Volkswagen also added a fastback to its 1966 offerings in the United States.

Prices. The ability of U.S. car manufacturers to absorb higher labor and materials costs and still record peak profits suffered mild setbacks as the time came to price the 1966 models, and new-car prices were boosted by from $20 to $89 per model on most Big Three volume cars. New auto and steel labor contracts negotiated in the 1965–66 period were taken into account, but what necessitated most—although not all—of the increased amounts was the addition of six so-called safety items as standard equipment on 1966 models. The industry decided to make these items standard equipment at extra cost after Senate hearings in July 1965 highlighted charges that American-made cars were lagging in passenger safety. Items made standard and built into the price structure of U.S. cars included padded dashboards and visors, backup lights, outside rear-view mirrors, windshield washers, two-speed windshield wipers, and rear seat belts. Ford also added a four-way emergency flasher.

By California law, 1966 models also were required to carry an exhaust-control device to reduce air pollution.

Meanwhile, the federal government began reducing the former 10% excise levy on new cars. The rate dropped to 7% in July 1965 and to 6% in January 1966.

WORLD MOTOR VEHICLE PRODUCTION, 1964

	Passenger cars	Trucks	Buses	Total
United States	7,745,492	1,562,368	...[1]	9,307,860
Canada	560,392	110,190	...[1]	670,582
Subtotal	8,305,884	1,672,558	...[1]	9,978,442
Argentina	115,857	48,106	2,520	166,483
Australia	340,614	71,136	...[1]	411,750
Austria	3,283	4,243	134	7,660
Belgium	...	2,070	...	2,070
Brazil	97,768	85,415	552	183,735
Czechoslovakia	42,115	11,942	1,411	55,468
Finland	...	900	100	1,000
France	1,321,081	258,281	2,767	1,582,129
Germany, East	90,000	22,500	...[1]	112,500
Germany, West	2,370,274	532,277[2]	7,106	2,909,657
Great Britain	1,867,640	446,255	18,481	2,332,376
Hungary	...	3,694	2,375	6,069
India	23,227	43,908	...[1]	67,135
Italy	1,028,930	58,305	2,843	1,090,078
Japan	579,660	1,109,136[3]	13,673	1,702,469
Netherlands	29,748	5,258	477	35,483
Poland	20,600	30,734	3,514	54,848
Rumania	6,113	15,999	...[1]	22,112
Spain	119,327	58,801	...[1]	178,128
Sweden	160,106	21,854	2,058	184,018
Switzerland	...	1,400	200	1,600
USSR	185,200	417,900	...[1]	603,100
Yugoslavia	27,219	11,473	...[1]	38,692
Subtotal	8,428,762	3,319,798	...[1]	11,748,560
World total	16,734,646	4,992,356	...[1]	21,727,002

[1] Included in truck figures. [2] Including 279,909 microbuses. [3] Excluding three-wheeled vehicles. Source: Automobile Manufacturers Association.

FOREIGN CARS

Imported-car sales in the United States for the first seven months of 1965 increased to 306,780, from 273,999 in the comparable 1964 period. Volkswagen accounted for virtually the entire increase. Its U.S. registrations in the seven-month period rose from 174,306 to 206,178. In July 1965, for the first time in nearly six years, monthly import-car sales exceeded the 50,000 mark, reaching 51,993. Of these, 35,526 were Volkswagens.

WORLD MOTOR VEHICLE REGISTRATION, JAN. 1, 1965

Area	Passenger cars	Trucks	Buses	Total
Canada	5,121,750	1,180,000	23,000	6,324,750
United States	71,950,198	14,041,445	305,490	86,297,133
Other Western Hemisphere countries[1]	3,915,346	2,303,447	193,172	6,411,965
Europe	39,996,632	9,242,148	2,016,687	51,255,467
Asia	3,567,346	4,466,173	280,146	8,313,665
Oceania	3,297,951	1,024,880	3,835	4,326,666
Africa	2,248,214	849,475	58,524	3,156,213
World total	130,097,437	33,107,568	2,880,854	166,085,859

[1] Includes Guam, Puerto Rico, Samoa, and the Virgin Islands. Sources: Automobile Manufacturers Association; U.S. Department of State.

In second place for January–July 1965 sales was MG, followed by Triumph, Volvo, Opel, Renault, Simca, Datsun, Mercedes-Benz, and Rootes. The only volume gainers over 1964 in this "top ten" group were the Opel, sold by General Motors, and the Chrysler-marketed Simca. By the end of 1965, Chrysler had bought a 45% stock interest in the Rootes Group in Britain.

Worldwide in 1964, General Motors and its subsidiaries took 28.3% of the motor vehicle market; Ford, 17.9%; Chrysler, 8.4%; Volkswagen, 6.1%; Fiat, 4.3%; British Motor, 3.9%; Renault, 2.3%; Citroën, 2.2%; American Motors, 2.1%; Simca, 1.3%; and Peugeot, 1.3%. In 1964, for the first time, more than half of the world's new cars were built outside the United States and Canada.

MAYNARD M. GORDON
Editor, "Motor News Analysis"

AVIATION. See AERONAUTICS.

AWARDS. See NOBEL PRIZES; PRIZES AND AWARDS.

AYUB KHAN, Mohammed. See biographical sketch under PAKISTAN.

BACTERIOLOGY

During 1965 an estimated 14,000 articles on bacteriology (microbiology) were published. A few of the year's important advances are described here.

Immunology. New vaccines for several human and animal diseases were developed. One was a multiple vaccine for four childhood diseases (whooping cough, poliomyelitis, diphtheria, and tetanus). The first vaccine for control of transmissible gastroenteritis in swine was put on the market, marking the culmination of a 19-year struggle to find a way to control the disease, which kills more than 1 million hogs annually.

Many theories have been advanced to explain how antibodies are formed by animals and man. Most antibodies are recognized as typical proteins (globulins). In 1965 sufficient evidence accumulated to support the "template theory" of antibody formation, because it is reconcilable with present views on genetic coding and protein synthesis.

Virology. The common cold has long been thought to be transmitted by a virus, but the virus could not be cultivated by known methods. In 1965 a common-cold virus was isolated and grown in tissue culture prepared from the windpipe of a human fetus.

Research to establish the causative agent of infectious hepatitis continued. Several strains of a virus were isolated from patients, and the accidental laboratory infections that resulted showed typical clinical symptoms of the disease. From these cases the known virus was isolated again.

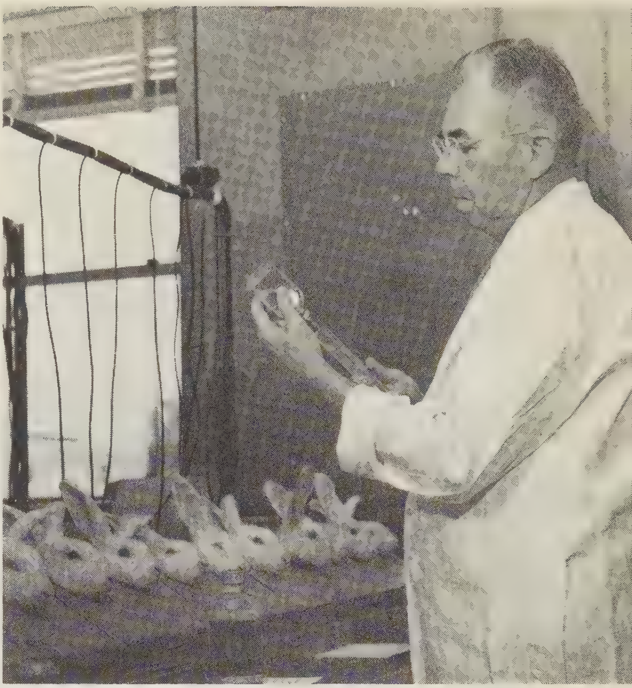
Adenoviruses cause a feverish disease in human beings and malignant tumors in rodents. The true structure of one of the viruses was described in 1964. Earlier electron micrographs had shown the virus to be a regular icosahedron, with 20 triangular surfaces and 12 corners. More recent pictures show that the 20 surfaces are made up of 252 subunits, and that at each of the 12 corners the units have a long flexible tail with a knob in its end. The virus uses the knobbed tail to pierce the wall of the host cell it infects. The host-cell antibodies must specifically destroy the knobs before the virus can be inhibited.

Many viruses that induce malignant tumors, especially in fowl and animals, have been found. Work is being done on these viruses to learn how they convert normal host cells to neoplastic cells which then develop independently.

Food. It has been found that the cuticle, shell, and shell membrane of the egg can support the growth of bacteria. This is of interest in understanding how bacteria enter eggs, and it explains how eggs may contaminate other foods. Several kinds of commercially packaged foods, such as cake and bread mixes, were found to contain bacteria, some capable of causing spoilage and intestinal diseases.

In some countries increased interest is being shown in growing algae (especially *Chlorella*) for human and animal food. It is possible to harvest 10 to 15 tons of *Chlorella* per acre, compared with 1.8 tons of rice or 0.5 tons of soybean. The nutrient value and vitamin content of *Chlorella* are several times as great as those of soybean or rice.

Type E botulism, caused by eating contaminated smoked fish, has stimulated inquiries into many aspects of the collection and processing of fish. The investigations of this disease include some research on the characteristics of the disease-producing organism, *Clostridium botulinum*. There has been an increase in the number of food poisoning cases caused by milk products which contain enterotoxin elaborated by staphylococci. The greater incidence of staphylococci in milk is attributed to acquired tolerance of the organisms for antibiotics used to treat mastitis in cattle.


NATIONAL INSTITUTE OF HEALTH

MULTIPLE VACCINE for four childhood diseases (diphtheria, tetanus, poliomyelitis, and whooping cough) is injected into rabbits' ears by technician to test its effects.

Industrial. Microorganisms play an important role in the production of several pure chemicals besides antibiotics. The output of itaconic acid made by mold fermentation was increased with the building of two new plants. The acid is used widely in making synthetic fibers and resins.

Several steroid hormones were produced for the first time by using microorganisms. For example, estrone and 19-norsteroids were synthesized from cholesterol.

J.R. PORTER
Chairman, Department of Microbiology
College of Medicine, University of Iowa

BADMINTON. See SPORTS.

BAHAMAS. See COMMONWEALTH OF NATIONS.

BAHRAIN. See ARABIA.

BAKING INDUSTRY. See FOOD SUPPLY.

BALLET. See DANCE.

BALTIMORE

For seven weeks in the spring of 1965, the news in Baltimore (1965 est. pop., 933,390) was "no news" because of a strike that closed all the city's daily newspapers.

Newspaper Strike. On April 17, members of the American Newspaper Guild, demanding higher wage scales and a union shop agreement, struck Baltimore's three *Sun* papers—*The Sun, The Evening Sun,* and *The Sunday Sun.* On April 20 the city's other daily paper, *The News American,* closed its doors to its employees in support of the *Sun.* The regional office of the National Labor Relations Board ruled on May 6 that *The News American* closing constituted an illegal lockout. The *Sun* papers and *The News American* resumed publication on June 3, after the *Sun* management and the Guild agreed on a 3-man board of arbitration to settle outstanding issues.

Antipoverty Program. Dr. Melvin J. Humphrey resigned as executive director of Baltimore's antipoverty program on June 29, after reported disagreements with Morton Macht, chairman of the commission that oversees the program. Active cooperation with the federal antipoverty program was begun by the city in 1965, but the establishment of neighborhood centers was delayed until poverty workers made better contacts with the poor.

Housing. Mayor Theodore R. McKeldin (Republican, elected May 7, 1963) supported the federal government's Housing and Urban Development Act of 1965, which enables the city to rent private housing and make it available to families eligible for public housing. A proposed ordinance to ban discrimination in housing sales and rentals was voted down by the 20-member city council.

New Transit System Proposed. A $292 million transit system that would combine rapid rail transit, subways, and express bus facilities was endorsed by the Metropolitan Transit Authority. The proposed system would require about 160 rapid transit cars and 900 buses to serve an estimated 460,000 passengers daily by 1995.

Law Enforcement. Law enforcement provided a continuing problem for the city in 1965. A stepped-up police recruiting program was 202 recruits short of its goal by early fall.

Public Finance. Financial problems troubled Baltimore officials in 1965. The city requested $9 million in state funds to help finance expanding services in parks and recreation areas and assist in keeping vital statistics.

Baltimore's 1965 city budget was $381,114,759 for current and capital expenditures. The property tax rate was $4.45 per $100 of assessed valuation.

Economy. Mayor McKelden announced that a proposed bond issue of $225,000,000 for the development of the inner harbor of the city would be ready for city council action by the spring of 1966. The city's harbor, a principal source of Baltimore's economic strength, had 5,367 ship arrivals in 1964.

The cost-of-living index in 1964 was 107.9 (1957–59=100).

Baltimore's leading industries, in terms of value added by manufacture, are primary metals, transportation and equipment, and food products.

MAURICE E. O'DONNELL
Assistant Professor of Government and Politics
University of Maryland

BANKING

The Federal Reserve banks, the central banking system of the United States, continued the policy of maintaining moderately easy credit and stability of interest rates in almost all of 1965, the fifth year of sustained economic expansion. On December 5, however, the Federal Reserve Board—an independent agency—increased the discount rate to 4.5% from 4% on loans by Reserve banks to member banks. The board announced that it had acted "to reinforce efforts to maintain price stability and thus to foster balance in the economy's continued growth," but President Johnson said he regretted "any action that raises the cost of credit."

ASSETS AND LIABILITIES OF U.S. BANKS[1]

	Sept. 9, 1964 (Millions of dollars)	Sept. 15, 1965
Assets		
Loans and investments:		
Loans	$204,470	$236,130
U.S. government obligations	65,080	61,560
Other securities	42,940	49,460
Total loans and investments	$312,490	$347,150
Cash assets	52,240	60,360
Other assets	9,430	10,690
Total assets	$374,160	$418,200
Liabilities and Capital		
Deposits:		
Interbank	$ 16,750	$ 18,320
Demand:		
U.S. government	4,570	4,490
Other	138,230	152,620
Time	169,140	191,580
Total deposits	$328,690	$367,010
Other liabilities	13,970	17,090
Total capital accounts	31,500	34,100
Total liabilities and capital	$374,160	$418,200

[1] Includes 13,785 commercial banks and 505 mutual savings banks as of Jan. 1, 1965. Source: Board of Governors of the Federal Reserve System.

During 1965 the substantial increase in total U.S. production gave rise to increasing credit demands, which were met by a large increase in commercial bank credit, particularly business loans. Nevertheless, a firmer policy of supplying reserves to facilitate the credit increase was followed in 1965 than in 1964. Also, some interest rates were slightly higher in 1965 than in December 1964.

Federal Reserve Policies. The 12 regional Federal Reserve banks facilitated the increase in commercial bank credit mainly through open-market purchases of U.S. government securities, thereby expanding the reserves of the commercial banks. The Reserve banks' holdings of U.S. government securities increased greatly in 1965, especially in the first half of the year, and at the end of September they were about $2.1 billion greater than at the end of 1964.

Partially as a result of these open-market purchases, there was an appreciable increase in the total reserves of the member banks. Member banks are the main commercial banks that own the stock of Federal Reserve banks and are controlled directly by the Federal Reserve. The amount of required reserves of member banks, measured as a percentage of the deposit liabilities of each, increased about the same as total reserves. Thus, total reserves of member banks in excess of required reserves averaged about $377 million in the first three quarters of the year, as compared with $410 million in the second half of 1964. Many member banks, however, borrowed for short periods from the Reserve banks to meet their reserve requirements. Beginning in March 1965, the member banks as a whole operated consistently with net borrowed reserves—an indication of a firmer Federal Reserve policy.

The discount rate had been increased from 3.5 to 4% in November 1964 to restrain short-term capital outflows attracted by higher rates abroad. Largely because of the continued capital outflow and loss of monetary gold reserves by the United States in 1965, Congress in March removed the requirement that the Federal Reserve banks must hold gold certificates equal to 25% of their deposit liabilities; however, the same requirement was retained for Federal Reserve notes. This change enabled the Reserve banks to avoid contracting Reserve credit and deposit liabilities. No changes were made in 1965 in the reserve requirement of the member banks.

Interest Rates. The interest rates of some commercial banks showed little change in 1965, but the rates of others rose slightly in the first three quarters of the year, following a general advance in 1964. The open-market yield on 3-month Treasury bills rose from 3.84 to 3.93% early in the year, declined to 3.8% at midyear, and averaged about the same in the third quarter as in December 1964. Yields on other types of short-term paper increased slightly in the same period.

The rates of leading commercial banks on prime loans—short-term loans to the bank's biggest customers having the highest credit rating—remained at 4½%. Long-term interest rates changed very little in the first three quarters of the year over those of December 1964. The average yields showed this pattern: on Federal Housing Administration mortgages, practically no change; on U.S. government bonds and corporate bonds, only fractionally higher; and on state and local government bonds, slightly higher.

Loans and Investments. Commercial bank credit—loans and investments of all commercial banks, of which member banks account for about 85%—again increased substantially in 1965. The increase, based on data seasonally adjusted and excluding interbank loans, was appreciably higher each month, except for a decline in July due to reduced investments. The level in September was about $18.9 billion above the year-end total in 1964. Loans, the major part of commercial bank credit, accounted for practically all of the increase. The total investments of commercial banks remained about the same. Their holdings of U.S. government securities (mostly bills) declined about $5.2 billion, and their holdings of other securities (mostly state and local government bonds) rose about $5.0 billion.

Total loans of commercial banks increased steadily. In September the amount was about $19.1 billion above that of December 1964—an increase substantially greater than in the corresponding period of 1964. Some indication of the changing pattern of loans was provided by the weekly-reporting member banks, consisting of about 350 member banks in 100 leading cities that provide more than half the total commercial bank credit. In the first three quarters of 1965, their business loans (commercial and industrial), the largest component in commercial bank loans, increased 13.3%; real estate loans increased 9.5%; and loans to individuals, mostly for consumption purposes, increased 7.7%.

Deposits and Currency. The money supply, consisting of demand deposits and currency outside banks (that is, held by businesses and individuals), increased moderately, in the first three quarters of 1965. The total, on a seasonally adjusted basis, amounted to $4.6 billion, as compared with $5.1 billion in the corresponding period of 1964. Demand deposits, comprising on the average about 80% of this active money supply, accounted for 71% of the increase. In the same period, the annual rate of turnover of demand deposits rose slightly, indicating a more intensive use of the supply. This moderate increase in the money supply and the substantial increase in commercial bank credit occurred in an expanding economy that experienced only a slight increase in the average level of prices. (See COST OF LIVING.)

Time and savings deposits increased $17.6 billion in the first three quarters of 1965, or slightly more than in the corresponding 1964 period. About 85% of the increase was accounted for by commercial banks, which held 73% of such deposits. Their time and savings deposits increased $15.1 billion, and those of mutual savings banks rose $2.5 billion. These commercial bank deposits, which have grown steadily for many years and have become an important source of commercial bank funds, are now larger than their demand deposits.

CLIFFORD L. JAMES
Professor of Economics, The Ohio State University

BAPTIST CHURCHES

Baptists are the largest single Protestant church in the United States. *The Yearbook of American Churches* for 1965 lists 29 autonomous Baptist bodies, whose membership represents about one third of all American Protestants. The Southern Baptist Convention is the largest Baptist group, followed by the National Baptist Convention, U.S.A., Inc., the National Baptist Convention of America, and the American Baptist Convention.

American Baptist Convention. The American Baptist Convention (formerly the Northern Baptist Convention) represents 6,119 churches in 45 states. The Convention, with national offices at Valley Forge, Pa., is affiliated with the Baptist World Alliance, the National Council of the Churches of Christ in the U.S.A., and the World Council of Churches.

At the convention's annual meeting, held in San Francisco, Calif., in May 1965, Robert G. Torbet, dean of the Central Baptist Theological Seminary, Kansas City, Kans., was elected president for 1965–66.

The convention conducts missionary and benevolent work and Christian education in the United States, Africa, Asia, and Latin America through 6 national societies and boards, 37 state conventions, and 13 city societies. This work is supported by contributions from churches to the American Baptist Mission Budget ($12,772,150 in 1966) representing the interests of all agencies, plus about $6,900,000 from other sources. In addition, a World Mission Campaign is projected for 1966–68 to raise $20,000,000 for mission work.

EDWIN H. TULLER
General Secretary, American Baptist Convention

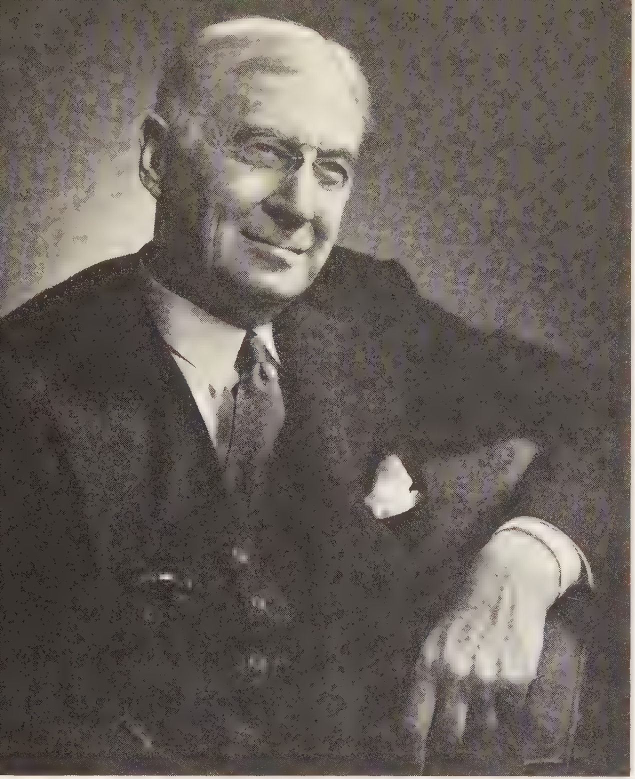
Southern Baptist Convention. The Southern Baptist Convention is the largest Baptist body in the United States, with a total of 33,388 churches in 50 states in 1964. Wayne Dehoney was reelected president at the 1965 convention, held in Dallas, Texas.

Seventy-two Southern Baptist educational institutions reported a 1964–65 enrollment of 90,510 and endowments of $113,044,688. Six seminaries—at Louisville, Ky.; New Orleans, La.; Fort Worth, Texas; Mill Valley, Calif.; Wake Forest, N.C.; and Kansas City, Mo.—enrolled 5,428 students. The American Baptist Theological Seminary for Negroes, at Nashville, Tenn., had 64 students.

The convention's 28 children's homes cared for 4,492 children and owned property valued at $37,084,906. The denomination also supported 1,901 foreign missionaries and 2,372 home missionaries. The annuity board reported 35,693 members, with assets of $135 million.

The convention's executive committee has its office in Nashville, Tenn. The Baptist Sunday School Board, also in Nashville, published and distributed 53 million quarterlies in 1965.

PORTER ROUTH
Executive Secretary, Executive Committee
Southern Baptist Convention



KARSH, OTTAWA

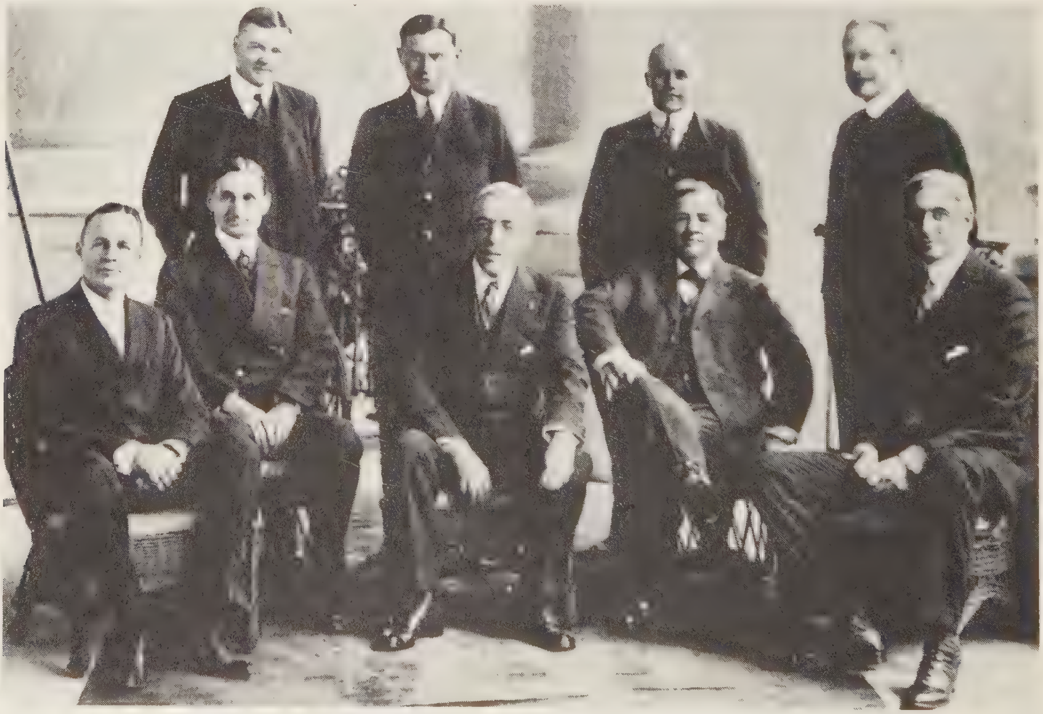
BARUCH, Bernard Mannes

American financier, philanthropist, and adviser to presidents: b. Camden, S.C., Aug. 19, 1870; d. New York, N.Y., June 20, 1965.

As an adviser to several presidents, a public official, and a self-made multimillionaire, Bernard Baruch reflected the temper of the American scene for half a century. A sounding board and spokesman for unformulated public opinion, Baruch, the legendary "park bench statesman," often put into words what the average American thought and felt but did not have the opportunity to say. He was, by turns, a Wall Street tycoon, a Wilsonian idealist, a reluctant New Dealer, and an Eisenhower Democrat. A man whose fame and influence were considerable, Baruch, in his determination to remain behind the scenes and avoid political risks, also forfeited many of the rewards of public service.

Entering public life in 1916 during the administration of President Woodrow Wilson, the financier mobilized American industry in World War I as chairman of the War Industries Board. His last major national service was in 1946 when President Harry S Truman named him to present to the United Nations the U.S. plan for control of atomic energy.

Early Life. Bernard Baruch was the second son of Dr. Simon Baruch, a surgeon born in Posen, East



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UPI

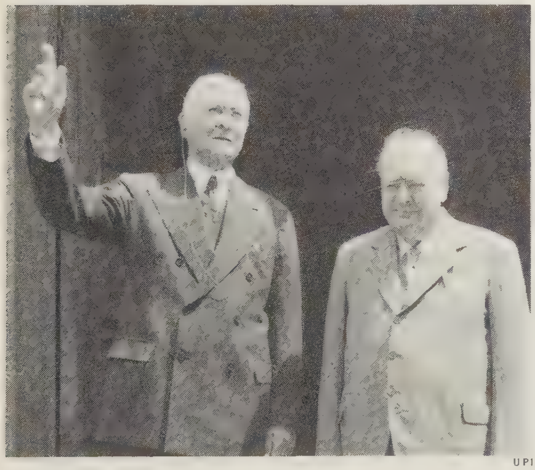
AS PRESIDENTIAL ADVISER, Baruch (*above, right*) served every president from Woodrow Wilson (seated, center) to John F. Kennedy. Baruch's post was chairman of the War Industries Board. At top left is Herbert Hoover.

IN WORLD WAR II, Baruch assisted President Franklin D. Roosevelt by heading a fact-finding commission on the conservation of essential rubber.

Prussia, who had served with the Confederate forces under Gen. Robert E. Lee, and of Belle (Wolfe) Baruch, of Winnsboro, S.C., whose American heritage reached back to colonial days. The family moved to New York in 1881, and Baruch graduated from the City College of New York in 1889. In 1897 he married Annie Griffen, who died in 1938. They had three children: Belle Wilcox Baruch, who died in 1964; Renée (Mrs. H. Robert Samstag); and Bernard M. Baruch, Jr.

Baruch started out in Wall Street as a runner earning $3 a week. He had amassed his first million dollars by the time he was 30, and by his mid-30's he had $1 million for every year of his age. He was a member of the legendary "Waldorf crowd," a group of financiers who frequented a bar in the old Waldorf-Astoria Hotel in New York City. Trained in speculation by such masters as Thomas Fortune Ryan and James R. Keene, Baruch took part in the development of vast industrial complexes.

Adviser to Wilson. A Democrat, Baruch attracted the attention of his fellow Southerner, President Woodrow Wilson. In 1916, Wilson appointed Baruch (whom he nicknamed Dr. Facts) to the Advisory Commission of the Council of National Defense, and made him chairman of the Commission on Raw Materials, Minerals, and Metals. Later, President Wilson put him in charge of all Allied purchasing. In March 1919, Wilson appointed him chairman of the War Industries Board. Baruch later rejected Wilson's offer to make him secretary of the treasury, although he accompanied the president to the Paris Peace Conference. As an economic adviser to the Peace Commission, a member of the Supreme Economic Council, and an American delegate dealing with the economics and reparations clauses of the peace treaty, Baruch frequently sat in at secret meetings of the Big Four—Orlando, Wilson, Lloyd George, and Clemenceau.



UPI

BARUCH'S FRIENDSHIPS with famous people were legendary. He visited lifelong friend Winston Churchill in 1956.

THE FAMOUS PARK BENCH STATESMAN made friends with passers-by in a park near his New York home.

UPI

Later Government Service. Baruch had few official responsibilities in the 1920's. Presidents Coolidge and Hoover used him to help get support from reluctant Southern Democrats for Republican programs. In the 1930's he turned down President Franklin D. Roosevelt's offer of an ambassadorship. He also rejected the job of war mobilization director in 1943. However, after James F. Byrnes accepted the latter post, Baruch assisted him, and also headed special fact-finding commissions for the president on the conservation of rubber and on postwar demobilization.

Celebrated Friendships. An intriguing mixture of sophistication and guilelessness, of Southern charm and American bluntness, Baruch enjoyed friendships that included Francis Cardinal Spellman and showman Billy Rose, and that bridged the years from "Diamond Jim" Brady to President John F. Kennedy. He was a lifelong friend of Sir Winston Churchill, whom he first met at the Paris Peace Conference in 1919. As prime minister, Churchill stayed at Baruch's New York home during Churchill's 1953 semiofficial meeting with President-elect Dwight D. Eisenhower.

Baruch once quipped, "I like anyone who's at the top of his profession," yet his gift for friendship also embraced the humble and the unknown. No one valued his public image more than Baruch, but he declined a medal for his public services on the grounds that his advice was so seldom taken.

Last Years. His later career was climaxed by his appointment as U.S. delegate to the UN Atomic Energy Commission, before which he flung down the simple challenge: "We are here to choose between the quick and the dead." Although it was vetoed by the Soviet Union, the Baruch plan for the control of atomic energy remained the official U.S. policy until the USSR developed its own atomic bomb.

Baruch was a talented amateur boxer in his youth and an avid hunter and swimmer into his 90's. He always maintained that old age was 15 years older than he was. He died on June 20, 1965, leaving the bulk of his great fortune to his alma mater, the City College of New York, and for medical research.

Books by Baruch: *The Making of the Reparation and Economic Sections of the Treaty* (New York and London 1920); *American Industry in the War*, ed. by Richard H. Hippelheuser (New York 1941); *A Philosophy for Our Time* (New York 1954); *Baruch: My Own Story* (New York 1957); *Baruch: The Public Years* (New York 1960). **Biographies:** Field, Carter, *Bernard Baruch, Park Bench Statesman* (New York 1944); White, William L., *Bernard Baruch, Portrait of a Citizen* (New York 1950); Rosenbloom, Morris, *Peace Through Strength: Bernard Baruch and a Blueprint for Security* (New York 1953); Coit, Margaret L., *Mr. Baruch* (Boston 1957).

MARGARET L. COIT
Associate Professor of Social Science
Fairleigh Dickinson University

BASEBALL. See SPORTS.

BASKETBALL. See SPORTS.

BASUTOLAND. See COMMONWEALTH OF NATIONS.

BECHUANALAND PROTECTORATE. See COMMONWEALTH OF NATIONS.

WIDE WORLD

FUNERAL OF QUEEN ELIZABETH, grandmother of Belgium's King Baudouin I, is held in Brussels on November 30.

BELGIUM

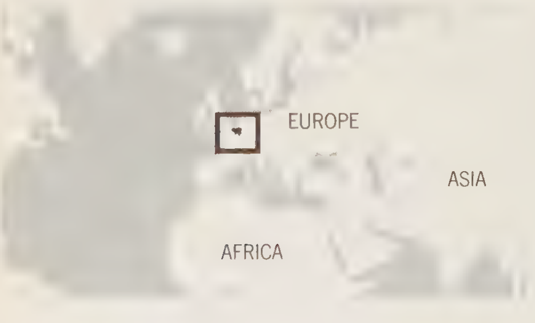
Belgium was without an official government for more than two months following the general election on May 23, 1965. In the election, the conservative Party of Liberty and Progress gained 20 seats in the Chamber of Deputies for a total of 48. The plurality of the Christian Socialists (Catholic party) dropped from 96 to 77 seats, and of the Socialist party (labor), from 84 to 64. Together, the Christian Socialists and the Socialist party still held majorities in both houses. However, Premier Théo Lefèvre interpreted the loss of seats by his coalition Christian Socialist-Socialist government as a rebuke, and resigned on May 24.

New Government. At the request of King Baudouin, Premier Lefèvre and his cabinet stayed on in a caretaker capacity, but they were without real policy-making power. Pierre Harmel, a Christian Socialist, was asked to form a cabinet. After the Party of Liberty and Progress refused to join a three-party coalition with the Christian Socialist and Socialist parties, which are solidly supported by the two great labor union blocs, Premier Harmel finally formed a cabinet on July 27. The new cabinet consisted of 15 Christian Socialist and 12 Socialist members.

Language Controversy. Premier Harmel, an experienced cabinet official, formerly headed a group studying Belgium's most pressing domestic problem: the tension between the French-speaking Walloons and the Flemish-speaking Flemings. The Walloons traditionally dominated the political and economic life of the country, but the Flemings have become the numerically larger group and the Walloons' economic position has declined. Bitterness over the various use of French and Flemish in the government and in the schools had increased tension to the point of bloody clashes in recent years. A linguistic law passed in 1963 drew a line across Belgium, dividing it into two major language areas, with the Brussels area designated as bilingual. The law was intended as a compromise to suit both groups and to resolve the conflict. Many observers, however, interpreted the results of the May election as indicating sharp disapproval of the linguistic law, since extremists of both the Flemish and Walloon groups gained seats.

In his first program announcement devoted exclusively to domestic matters, Premier Harmel called for mutual understanding and moderation between the two communities. A Permanent Parliamentary Commission was appointed representing all parties in Parliament to cooperate with the government in drawing up proposed constitutional changes to solve the problem. A solution was to be sought within the present governmental framework through increased cultural and administrative autonomy for both regions, rather than through a federal system, as demanded by the extremists.

BELGIUM · Information Highlights



Area: 11,781 square miles.
Population: 9,428,000 (December 1964 est.).
Chief Cities (1961 commune pop.): Brussels, the capital, 170,489; Antwerp, 253,295; Ghent, 157,811; Liège, 153,240; Schaerbeek, 117,180.
Government: *King*—Baudouin I (b. 1930; acceded 1951). *Premier*—Pierre Harmel (took office July 28, 1965). *Parliament*—Chamber of Deputies, 212 members; party seating (1965)—Christian Socialists, 77; Socialists, 64; Liberty and Progressive, 48; others, 23. Senate, 178 members.
Religious Faiths: Roman Catholics, 89% of population; Protestants, 6%; others, 1%.
Education: *Total school enrollment* (1962)—1,080,169 (primary, 725,475; secondary, 78,169; teacher-training, 8,345; technical, 222,518; higher, 45,662).
Finance (1964 est.): *Revenues*, $295,318,000,000; *expenditures*, $326,284,000,000; *public debt* (1963), $892,104,000,000; *monetary unit*, franc (50 francs par value equal U.S.$1).
Gross National Product (1964): $15,360,000,000.
National Income (1963): $11,020,000,000; average annual income per person, $1,186.
Economic Indexes (1964): *Industrial production*, 140 (1958=100); *agricultural production*, 122 (1956–57=100); *cost of living*, 111 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 8,736,000; cement (1964), 5,846,000; wheat flour, 769,200; meat, 515,000; cotton yarn, 94,320; wool yarn, 62,280; butter, 50,400.
Crops (metric tons, 1964): Sugar beets, 3,300,000 (ranks 14th among world producers); oats, 401,000 (world rank, 18th); rye, 136,000 (world rank, 18th); potatoes, 1,755,000; wheat, 843,000; barley, 494,000; linseed, 25,000.
Minerals (metric tons, 1964): Anthracite coal (1963), 5,986,000 (ranks 8th among world producers); kaolin (1962), 208,602 (world rank, 8th); lime, 2,298,000; iron ore, 61,000.
Foreign Trade (including Luxembourg, 1964): *Exports*, $5,590,000,000 (chief exports, 1963: iron and steel, $882,912,000; textile yarn, fabrics, $506,424,000; nonelectrical machinery, $298,906,000; petroleum products, $155,990,000); *imports*, $5,901,000,000 (chief imports, 1963: nonelectrical machinery, $507,274,000; transport equipment, $483,048,000; textile yarn, fabrics $231,476,000). *Chief trading partners* (1963): West Germany (took 19% of exports, supplied 19% of imports); Netherlands (took 23% of exports, supplied 15% of imports); France (took 15% of imports, supplied 15% of imports).
Transportation: *Roads* (1964), 58,036 miles (47,473 paved); *motor vehicles* (1964), 1,407,800 (automobiles, 1,176,000); *railways* (1963), 2,871 miles; *merchant vessels* (1964), 79 (734,000 gross registered tons); *national airline*, Sabena; *principal airport*—Brussels.
Communications: *Telephones* (1964): 1,370,848; *television stations* (1964), 15; *television sets* (1964), 1,390,000; *radios* (1963), 3,049,000; *newspapers* (1961), 47 (daily circulation, 2,623,000).

The language problem has already injected itself into external affairs. Some 300 Belgian families contended before the European Court of Human Rights that their rights were violated by Belgium's linguistic laws, which deny them the privilege of selecting the language medium for instruction of their children. Belgium's acceptance of the jurisdiction of the European Court of Human Rights is to expire in 1966. However, if Belgium renews acceptance of the court's jurisdiction, and if the court decides that the linguistic laws are a violation of basic human rights, the Fleming-Walloon dispute probably will become an even greater problem.

Economy. In 1965 the Belgian economy began to show signs of a slowdown in its rate of growth. Export volume was affected adversely by the pressure of barriers raised by larger countries. Belgian wages were no longer among the highest in Europe. In mid-1965, on the advice of the European Economic Community Commission, the government relaxed its economic restraints by means of antideflationary measures, including the abolishment of credit restrictions.

Foreign capital investments continued to be welcomed, particularly in the less prosperous southern part of the country. Southern Belgium suffered economic setbacks as the result of the closing of several high-cost coal-mining operations. Among the foreign investors were General Motors, which began construction of a $100 million automotive manufacturing and assembly plant in Antwerp, and Caterpillar Tractor, which planned a large plant in southern Belgium.

AMRY VANDENBOSCH
Department of Political Science
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BELLOW, Saul. See biographical sketch under AMERICAN LITERATURE.

BELYAYEV, Pavel I. See biographical sketch under SPACE EXPLORATION.

BERLIN. See GERMANY.

BERMUDA. See COMMONWEALTH OF NATIONS.

BERRYMAN, John. See biographical sketch under AMERICAN LITERATURE.

BHUTAN. See INDIA.

BIOCHEMISTRY

Biochemistry and the closely allied field of molecular biology continue to give fascinating new information about life processes. This information, which is derived by ingenious biological approaches, combined with the quantitative techniques of chemistry and physics, may have far more implications for man's future than even space exploration. Particularly noteworthy has been the impact on biochemical research of the use of isotopes and of advances in physical instrumentation, electronics, and computation.

Energy Transduction. Continued probing has produced more information about the methods by which cells trap oxidative energy or light energy for use in metabolic syntheses. Observations by Lars Ernster and Britton Chance showed that the mitochondria, the powerhouses of the cell, can carry out energy-linked reduction and other processes without requiring phosphorylation.

Similar studies of the way plants capture energy by photosynthesis demonstrated two distinct pigment systems. The systems are responsible for producing the light-induced electron flow, which generates the reducing power, and adenosine triphosphate (ATP), which is needed for overall photosynthesis. One of the key substances reduced in this sequence was identified as ferredoxin, an iron-containing protein.

Muscle Contraction. By combining studies of the properties of isolated muscle proteins and of electron microscopic observations on intact muscle fibers, a considerable understanding of muscle contraction has been obtained. The earlier concept that ATP breakdown is a necessary concomitant of a single muscle twitch is more firmly substantiated.

Setsuro Ebashi showed that a delicate balance of calcium ion concentration, controlled by a sarcoplasmic reticulum (an interconnecting membrane system in the muscle cell) surrounding a myofibril (contractile element), probably serves as the basis of contraction control. How ATP drives contraction still remains obscure, however.

Enzyme Mechanisms. The study of enzymes, the biological catalysts, has reached a stage where there now is considerable knowledge of the details of their action. For instance, research on the hydrolytic enzyme chymotrypsin gave a clear definition of the roles of certain serine and histidine residues at the active catalytic site. Combination of such catalytic requirements and organic reactions made possible the synthesis of specific inhibitors for reaction at the active sites of enzymes.

A development of considerable importance is the recognition of change in the catalytic capacity of enzyme molecules as a widespread cellular control mechanism. Enzymes functioning in key branch points of metabolic pathways have binding sites for substrates involved in the enzyme-catalyzed reaction, as well as for other molecules which depress or enhance catalytic activity. These specific binding sites set up a "feedback" mechanism by which the amount of the end product of the metabolic chain can inhibit or activate the initial enzyme reaction. Thus, when the cell has a sufficient amount of a given product, the synthesis of this product is shut off by the inhibiting factor. Such enzyme control helps an organism maintain its complex balance of cellular constituents in a changing environment.

Protein Structure. An intriguing blend of biological and chemical techniques was used in studies on the evolutionary changes that occur in the primary sequence of amino acids in proteins. Emil Smith and his associates showed that in all species certain amino acid residues are found in key positions in the important respiratory pigment, cytochrome C. These "constant" residues are important for determining the structure and function in the organism, but other residues may undergo a change in the evolutionary process without important modification in structure or properties. Such differences help to define evolutionary relationships and to obtain an understanding of which amino acids are important for structure and function.

Nucleic Acids and Protein Synthesis. The study of protein synthesis is important because it eventually will provide fundamental information about growth and differentiation. This information is one of man's best hopes for the control of cancer and metabolic diseases.

The mechanism of protein synthesis involves nuclear DNA, the synthesis of messenger RNA, the formation of activated amino acid derivatives on low molecular weight RNA, and the assembly of protein molecules on the RNA-protein-ribosome complexes. This mechanism has been described in detail by François Jacob and Jacques Monod, who jointly received the 1965 Nobel Prize in physiology, principally for their contributions to the understanding of this chain of events.

They proposed that protein synthesis was controlled by a genetic "repressor." They envisaged the target area of control as an "operon"—a unit of adjacent genes with related function on a chromosome. The action of the "operon" is controlled by an "operator," which itself is under the control of a specific repressor. If the repressor is in an active state, it binds the operator, causing it to switch off the operon controlling the synthesis of a certain protein or enzyme.

The beautifully simple concept of a genetic transmission of information by a linear genetic code in DNA continued to get more support. The work of Marshall Nirenberg, Severo Ochoa, and Sidney Brenner, among others, provided a nearly complete definition of the required triplet arrangement of the nucleotide bases in the DNA molecule. With this definition, the particular amino acids which should be inserted into the growing protein chain could be specified.

Evidence continued to accumulate supporting the viewpoint that the specification of a linear sequence at the site of synthesis is sufficient for the assembly of the complex three-dimensional structure of the protein molecule. Individual protein molecules may then associate to give multimolecular complexes, cellular organelles, and, ultimately, intact cells.

How the chromosome itself is duplicated remained unsolved. Arthur Kornberg and his associates achieved the enzymic synthesis of DNA in vitro. However, they were capable only of synthesizing one strand of the helical duplex structure of DNA. The system in the intact cell synthesizes two helical duplex strands from one helical duplex used as a template. (See GENETICS.)

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BIOGRAPHY. See biographical articles in their alphabetical order; biographical sketches within articles; and the NECROLOGY listings on pages 757–768.

BIOLOGY. See BOTANY; GENETICS; MARINE BIOLOGY; ZOOLOGY.

BIRTH DATA. See POPULATION TRENDS.

BLINDNESS

Several new instruments and techniques were developed in 1964 and 1965 for use in the never-ending battle against blindness. These included implements and methods for performing rapid eye surgery and cryosurgery, and electronic pencils to help blind persons read. In addition, ultrasound and laser beams facilitated eye operations, and intravenous fluorescein aided eye photography.

Rapid Eye Surgery. The new instruments for rapid eye surgery were iris scissors, scleral punches, corneal splints, and multiple-tip diathermy needles. The first three instruments will prove invaluable to eye surgeons who must make many and quick on-the-spot operations following a disaster. The fourth will be useful in retinopexy.

Advances in corneal surgery included an improved automatic corneal trephine (cylindrical saw), the refining of the process of using an alpha-chymotrypsin solution to make lens removals easier, a simplified method for preserving donor eyes for transplantations, and a sterile kit for the long-term preservation of donor eyes.

ON
OFF
POWER

UPI

EYE "SURGERY" is performed by using a laser coagulator beam to "weld" detached or torn retinas to the eye.

Cryosurgery. In cryosurgery (the use of extreme cold in operations), a new method proved successful in introducing intense cold to the area of the retina without damaging the scleral (outer) wall of the eyeball. This process, called cryopexy, will reduce the need for scleral resection. Cryopexy can also be used in treating impending retinal tears when coagulation is not advisable because of lens changes or vitreous hemorrhage.

A new supercooled cryoextractor was developed for use in cryoextraction of cataracts. This cryosurgical probe defrosts rapidly and will disengage more quickly on completion of an operation.

Electronic Pencils. The appearance of two kinds of electronic pencils—one for the Roman alphabet and one for the Cyrillic (Slavic) alphabet—will enable blind persons to read books other than those printed in Braille.

Ultrasound Technique. Ultrasound proved effective in locating nonmagnetic foreign bodies embedded in the eye. This method, similar to sonar, utilizes a crystal loudspĕaker to transmit short bursts of high-frequency sound through the eye. On hitting an obstacle—for example, a tumor—the sound reflects as an echo, which can be made to appear visually on a cathode ray tube screen. The information can be photographed for the study and location of the foreign body.

Laser Beams. A hand-held direct-view laser photocoagulator under development will simplify the procedures for treating impending retinal detachment and sealing small tears and holes. The laser produces a pulse of light energy which passes through an optical system in the instrument head and is reflected into the patient's eye. The lens of the eye focuses the laser beams to produce a minute coagulation. The retina is "welded" to the choroid by a series of these coagulations through repeated pulses from the laser.

Photographing the Fundus. A big advance in studying the fundus of the eye occurred with the discovery that fluorescein can be injected into the patient's veins to outline obstructions in the choreidal blood vessels for photographing.

ROLAND I. PRITIKIN
Eye Surgeon and Consulting Ophthalmologist;
and M.L. DUCHON
Ophthalmologist

BOATING

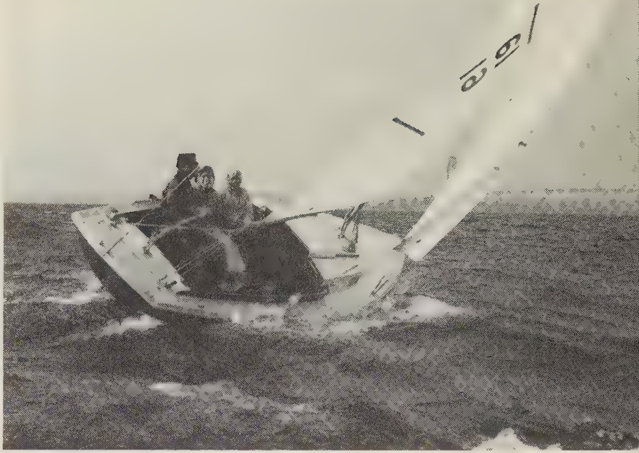
On Jan. 1, 1965, there were an estimated 7,700,000 pleasure boats in the United States. This number was expected to increase to 7,900,000 by Jan. 1, 1966. Fishing, cruising, water skiing, and hunting, in that order, were the principal reasons for boat ownership.

Sales. The pleasure boating industry registered a 12% retail business increase in 1965 over the previous year. Manufacturers' sales of both inboard and outboard boats, outboard motors, inboard engines, accessories, and hardware increased about 5% in 1965. Unit sales in 1965 of outboard boats (250,000), outboard motors (393,000), and boat trailers (130,000), however, remained below the 1961 level, despite the improved sales picture. An increased emphasis on service and on the sale of replacement parts boosted dealer income and profits in 1965 to their highest level.

Of special significance to the boating industry was the increased interest in sailboats, canoes, houseboats, pontoon boats, inboard-outdrive powered boats, and electronic gear. Sailboat and canoe sales doubled annually between 1963 and 1965. More than 40,000 canoes and 25,000 sailboats of all sizes were sold in 1965. Several hundred stock boatbuilders offered all or several of their 1966 models with inboard-outdrive power. Sales of this new power option increased from 20,000 units in 1964 to 30,000 in 1965, and industry authorities predicted a 35,000-unit market for 1966.

Industry Trends. Many boating retailers diversified their operations to combat seasonal slumps by stocking camping equipment and nautical clothing, and by establishing surfside restaurants and cabana colonies. The horsepower competition between major outboard motor manufacturers continued with the introduction of a 110-horsepower model in 1966. The average length of the new outboard boat sold in 1965 was 15.3 feet, a gain of 0.3 feet over the 1964 figure.

Fiber glass continued to be the predominant boatbuilding material. Next came aluminum, particularly for use in smaller boats such as canoes, rowboats, prams, and small runabouts. Regardless of the hull material, more use was made of fine woods as trim on boats, thus combining the practicality of fiber glass or aluminum with the characteristic beauty of wood.


H.A. BRUNO & ASSOCIATES, INC.

SAILBOATING in such boats as this 19½-foot Corinthian sloop with fiber glass hull became more popular in 1965.

The trend continued in the 1966 models toward the use of more chrome and upholstery, wall-to-wall waterproof carpeting, and more builder-installed accessories. This trend was strengthened further by Chrysler Corporation's entry into the pleasure boating market.

Jet-drive boats continued to receive wide acclaim, although only 1,400 of them were sold in 1965. Improvements in their engineering, however, probably will lead to their increased acceptance.

A shortage of berthing facilities continued in 1965, despite the rapid increase in marina installations.

Charles A. Jones
Editor, "Boating Industry"

H.A. BRUNO & ASSOCIATES, INC.

PLEASURE CRAFT, particularly cruisers and sailboats, were among the popular attractions at the annual National Boat Show, which was held at the New York Coliseum from Jan. 14 to 23, 1965. The five floors of exhibits held more than 500 boats from 400 exhibitors.

UPI

BOLIVIAN SOLDIERS were sent to the Catavi tin-mining area in September to put down a rebellion of miners who were protesting the government's efforts to reorganize some of the mines.

BOLIVIA

Widespread strikes, riots, and antigovernment plots troubled Bolivia during 1965. Most of the agitation was led by supporters of former President Victor Paz Estenssoro, who had been overthrown in November 1964 and replaced by a military junta. Despite political unrest, the new government restored a degree of economic stability to Bolivia.

Military Junta. In May 26, 1965, Gen. Alfredo Ovando Candia, commander in chief of the Bolivian armed forces, was installed as copresident with Lt. Gen. René Barrientos Ortuña.

During the year the ruling junta exiled leaders of dissident political groups, considerably weakening the major opposition parties. Those exiled from the Movimiento Nacionalista Revolucionario (MNR), the former governing party, included ex-President Hernán Siles Zuazo and most of the former ministers of government. The junta also exiled Juan Lechín Oquendo, former vice president under Paz Estenssoro, and head of the Party of the National Revolutionary Left (PRIN), the tin miner's union, and the Bolivian Workers' Confederation. Top Communists, including labor leaders Federico Escobar and Ireneo Pimental, also were exiled.

BOLIVIA · Information Highlights

Area: 424,163 square miles.
Population: 3,702,000 (July 1, 1965 est.).
Chief Cities (1965 est.): Sucre, the capital, 58,549; La Paz, 366,487; Cochabamba, 95,083; Oruro, 94,336.
Government: *Junta copresidents*—Lt. Gen. René Barrientos Ortuña (took office Nov. 4, 1964), Gen. Alfredo Ovando Candia (took office May 26, 1965). *Parliament*—Senate, 27 members; party seating (1964)—Movimiento Nacionalista Revolucionario (MNR), 22; Partido Revolucionario de Izquierda Nacionalista (PRIN), 5; Chamber of Deputies, 73 members; party seating—MNR, 57; PRIN, 9; Falangists, 3; Authentic Revolutionary Party, 2; Social Christian Party, 1; Unión Cívica Nacional, 1.
Religious Faiths: Roman Catholics, 94% of population; Protestants, 2%; others, 4%.
Education: *Literacy rate* (1964), 37% of population aged 5 and over. *Total school enrollment* (1964)—587,370 (primary, 495,000; secondary, 73,190; teacher-training, 2,980; technical, 6,500; university, 9,700).
Finance (1964): *Revenues*, $68,400,000; *expenditures*, $61,800,000; *monetary unit*, peso (12 pesos equal U.S.$1).
Economic Indexes (1965 est.): *Industrial production*, 139 (1958=100); *cost of living*, 172.1 (1958=100).
Gross National Product (1964): $542,000,000.
National Income (1964): $468,000,000; average annual income per person, $128.
Manufacturing (metric tons): Gasoline (1963), 118,000; sugar (1964), 101,000; cement (1964), 64,000; meat (1961), 27,000; wheat flour (1963), 8,000.
Crops (metric tons): Potatoes (1961), 565,000; maize (1960), 205,000; barley (1961), 69,000; cocoa beans (1964), 2,000.
Minerals (metric tons, 1964): Tin, 24,700 (ranks 3rd among world producers); antimony, 9,640 (world rank, 3rd); silver, 4,822,611 troy ounces (world rank, 9th); gold, 50,043 troy ounces; lead, 17,682; zinc, 9,400; crude petroleum, 3,195,000 barrels; tungsten, 2,073 (world rank, 6th); sulfur, 10,806; copper, 4,681.
Foreign Trade (1964): *Exports*, $85,600,000 (chief exports, including costs of freight and smelting metals abroad: tin, $80,900,000; silver, $6,200,000; lead, $4,900,000; zinc, $3,100,000; tungsten, $1,400,000); *imports*, $96,600,000 (chief imports, 1962: wheat flour, $9,910,000; motor vehicles, $5,960,000; medicaments, $2,700,000). *Chief trading partners* (1963): U.S. (took 32% of exports, supplied 51% of imports); Great Britain (took 47% of exports, supplied 6% of imports); West Germany (took 5% of exports, supplied 14% of imports).
Transportation: *Roads* (1964), 15,094 miles (382 paved); *motor vehicles* (1964), 27,784 (automobiles, 9,000); *railways* (1963), 1,734 miles; *national airline*, Lloyd Aéreo Boliviano; *principal airport*, La Paz.
Communications: *Telephones* (1964): 19,500; *radios* (1963), 360,000; *newspapers* (1961), 6 (daily circulation, 92,000).

UPI

RIOTING broke out in La Paz in May after Bolivian government deported Juan Lechin Oquendo, top labor leader and ex-vice president.

Legislation. In the field of legislation, the junta promulgated a new mining code to stimulate investment in the private sector of the economy, revised the election law, strengthened the agrarian reform law, and decreed new labor legislation intended to inhibit the political participation of union leaders. The junta abolished the Bolivian Workers' Confederation and replaced it with the government-controlled Central Union Organization.

Elections. The junta rescheduled elections several times during the year. Elections for president, vice president, and members of congress were finally set for the first part of 1966. After Barrientos announced his candidacy for the presidency, both the military and the political parties requested that he resign from office six months prior to elections, as stipulated in the constitution. The Popular Christian Movement was formed to support his candidacy.

Police Conspiracy. On January 3 the government forestalled a conspiracy by the federal police force to overthrow the Barrientos regime. More than 100 alleged plotters were arrested. The government identified the leaders of the plot as followers of Paz Estenssoro. The federal police force was disbanded and replaced by a National Guard for Public Security.

Miners' Strike. Armed workers seized 16 government-owned mines on May 16, protesting the exile of Lechín Oquendo, head of the tin miners' union and of the Bolivian Workers' Confederation. The miners also protested the government's planned reorganization of mines that lose money, a move which threatened to abolish 7,000 jobs. The Workers' Confederation called a general strike to demonstrate sympathy for the 30,000 striking miners, and about 6,000 additional workers responded. The walkouts temporarily paralyzed the economy.

On May 23 the government issued a decree placing the tin mines under military rule and enlisting all miners in the armed forces. Heavy fighting took place betwen the miners and the soldiers sent to occupy the mines. At least 48 persons were killed and 284 were wounded before a truce agreement ended the fighting on May 25.

Discontent in the Schools. The teachers' unions threatened to call a strike unless wages were increased. University and secondary school students demanded that the junta allocate funds to improve educational facilities. Leftist students protesting U.S. action in Santo Domingo attacked the U.S. embassy in La Paz on April 3.

Economy. The economic picture brightened in 1965, as the gross national product increased by an estimated 4.5% over the preceding year. The greatest increase came in agricultural production, although the output of petroleum also rose considerably. External earnings increased because of favorable trade terms and a rise in tin prices on the world market. The government cancelled trade agreements favoring certain nations, and the country reverted to a free trade system. Major investments were made in road construction and the cultivation of new land, and austerity measures were introduced to help curb rising inflation. In October the Inter-American Development Bank, the U.S., and West Germany, announced a $10 million financing plan for Bolivia's reorganized mines.

LOU ANN BENSHOOF
Research Associate, The American University

BONDS. See STOCKS AND BONDS.

BOOK PUBLISHING

Book sales in the United States established a new high of nearly $2.25 billion in 1965. This figure included sales in all divisions of the industry—general trade, including children's books; mail order, including book clubs; encyclopedias and other reference works; technical and business books; paperbacks, both "quality" and mass market; and textbooks.

Sales of textbooks at all levels skyrocketed. The increase was due in part to the books purchased under the newly enacted National Defense Education Act, the federal anti-poverty program, and the Secondary Education Act.

Export sales totaled nearly $200 million in 1965. During the year, book publishing stocks remained at high levels, and many publishing stocks registered new highs.

Best Sellers. In the early months of 1965, the leading fiction best sellers were Saul Bellow's *Herzog* (Viking), Irving Wallace's *The Man* (Simon & Schuster), and Gore Vidal's *Julian* (Little, Brown). The nonfiction list for the same period was led by Dag Hammarskjöld's *Markings* (Knopf) and Luigi Barzini's *The Italians* (Atheneum). At midyear the Hammarskjöld book was challenged for top position by Samuel Eliot Morison's *The Oxford History of the American People* (Oxford), Theodore White's *The Making of the President 1964* (Atheneum), and Larry Collins and Dominique Lapierre's *Is Paris Burning?* (Simon & Schuster).

During the summer the top fiction sellers were James Michener's *The Source* (Random House), Bel Kaufman's *Up the Down Staircase* (Prentice Hall), Morris West's *The Ambassador* (Morrow), and Arthur Hailey's *Hotel* (Doubleday). All four were still selling well at the close of the year and were joined by John Le Carré's new mystery, *The Looking Glass War* (Coward McCann), Irving Stone's *Those Who Love* (Doubleday), and Robin Moore's *The Green Berets* (Crown).

During the Christmas season the nonfiction field was led by Theodore Sorensen's *Kennedy* (Harper & Row). Other leading sellers were Arthur Schlesinger Jr.'s *A Thousand Days* (Houghton Mifflin); *Intern*, by Dr. X (Harper & Row); *Yes I Can*, an autobiography by Sammy Davis (Farrar, Straus & Giroux); *Games People Play*, by Eric Berne (Grove Press); and *A Gift of Prophecy* by Ruth Montgomery (Morrow). (See also AMERICAN LITERATURE.)

Conferences. The International Publishers Association, with the American Book Publishers Council as host, met in Washington, D.C., on May 30, 1965, with 1,500 delegates from all parts of the world attending. American publishers hoped that the U.S. Congress would complete a revision of the obsolete U.S. copyright law before the conference opened. However, legislation bogged down over attempts to rewrite the law to satisfy both factions in a dispute over "fair use," or the role of computer reproduction as related to the storage and retrieval of textbook material.

A major conference on the use of paperback books in the schools was held at Columbia University, New York City, on October 7. It was hoped that the conference would result in more new titles (over 35,000 titles were in print in 1965) and in a wider use of paperbacks among the general public as well as in the schools.

National Award. The first of the National Book Committee's National Medal for Literature was presented to Thornton Wilder at the White House on May 4. The annual award honors an American author for the body of his work. (See also PRIZES AND AWARDS.)

Censorship. The U.S. Supreme Court agreed to hear arguments on an appeal of the ruling by the Massachusetts Supreme Court that the novel *Fanny Hill* by John Cleland is obscene. It is expected that the federal court's decision will clarify the legal definition of obscenity in the United States.

Title Figures. Titles published in 1965 totaled 28,595, as compared with 28,451 in 1964. The breakdown for the major categories in 1965 (with 1964 figures in parentheses) was: fiction, 3,241–down 0.9% (3,271); religion, 1,855–up 1% (1,830); science, 2,562–down 6% (2,738); technical, 1,153–up 2% (1,125); juvenile, 2,859–up 3% (2,808); education, 954–down 23% (1,232).

JOSEPH A. DUFFY
Executive Director
American Booksellers Association, Inc.

BORNEO. See MALAYSIA.

BOSCH, Juan. See biographical sketch under DOMINICAN REPUBLIC.

BOSTON

Throughout 1965, Boston's major problem was racial imbalance in the city schools. On Oct. 1, 1965, there were 46 predominantly Negro schools, enrolling 23,919 nonwhite students out of a total school population of 93,055. When schools opened in September, some parents undertook to transport their children to less crowded schools, and the state legislature enacted a law forbidding the imbalance. Massachusetts thus became the first state to pass a law forbidding racial imbalance in its public schools. A majority of the five-member school committee denied the contention that the situation was harmful to Negro children, and their position was the central issue of the November election. Most of the incumbents won reelection.

Urban Renewal. Boston's vitality was demonstrated by its urban renewal program. During the year, the Prudential Tower was dedicated, and the War Memorial Auditorium and the Sheraton-Boston Hotel were opened (all are part of the Prudential Center complex). In the government center, new state and federal office buildings neared completion. Private building plans went forward, including those of the Christian Science Church to redevelop a large tract in the Back Bay area. However, some residents strongly opposed the Charlestown and North Harvard Street (Allston) projects, and scattered protests occurred elsewhere.

The question of urban renewal was the main issue in the City Council election in November. Most of the nine incumbents, a majority of whom favored urban renewal, won reelection.

Education. In September the Boston branch of the University of Massachusetts opened its doors to freshmen. The Massachusetts Bay Community College opened a branch in Watertown, and plans progressed toward a permanent site for a community college in Charlestown. Harvard University opened new quarters for its Graduate School of Education and the Massachusetts Institute of Technology completed the Bush Earth Science and Materials Center.

The presidents of Wellesley College, Tufts, and Boston University announced their resignations during 1965.

In a related area, Milton Lord retired as director of the Boston Public Library. He was succeeded by Philip McNiff.

Economy. A slow rate of growth was recorded in Boston's economy. The value of products manufactured in the city was $1,526,680,212 in 1963, and in the 18 communities of the Greater Boston industrial area, $3,279,600,515. The number of employed production workers in the area reached 287,400 in August 1965, with average weekly earnings of $106.50. Imports through the port of Boston in 1964 totaled 6,124,068 tons; exports totaled 1,008,007 tons.

Tax Rate. Boston's tax rate was increased in 1964 by $15.20, to $115.00 on $1,000 value of

THE PRUDENTIAL CENTER

BOSTON'S SKYLINE is dominated by the Prudential Tower. The new 52-story skyscraper is part of the $150 million Prudential Center, dedicated in 1965. The complex also contains a 29-story hotel and a civic auditorium.

property. The city budget increased by over $10 million, to $136,534,885. The gross city debt, as of Oct. 1, 1964, was $144,412,500, and the net debt was $99,377,315. The city's assessed property valuation increased slightly, to $1,460,000,000. Mayor John F. Collins, together with business leaders of the city, campaigned for the adoption of a sales tax by the state legislature.

Population Decrease. Like most large American cities, Boston experienced a population decrease in the early 1960's. The state census of 1965 showed 616,326 inhabitants in the city, compared with 697,197 in the 1960 federal census. During this five-year period, other cities of the metropolitan area, such as Somerville, Cambridge, and Lynn, also decreased in population, while the outlying suburbs gained. The population of the metropolitan area increased from 2,589,301 to 2,597,971 in the same period.

GEORGE D. BLACKWOOD
Professor of Political Economy, Boston University

BOTANY

In 1965, as in previous years, an increased use was made of botanical data in diverse fields of scientific endeavor. The information obtained from botanical investigators has been of value to research projects in agriculture, genetics, medicine, conservation, population studies, and space exploration.

Music and Plant Behavior. Since 1953 there have been several published reports on the positive effects of sound on the growth of plants. Two botanists from India, T.C.N. Singh and S. Ponniah, have strongly advocated the use of music to increase growth in different types of plants. However, R.M. Klein and P.C. Edsall exposed plants that were grown in a rigidly controlled environment to various types of music. The data obtained from their experiments showed that no musical selection had a significant effect on the growth of vegetative or reproductive structures.

Exobiology (Exobotany). Scientists disagree about the status of exobiology, the study of extraterrestrial life. (Various other terms, such as xenobiology, have been used, but exobiology has been adopted by the National Aeronautics and Space Administration and is now part of the language.) The major question in this field is whether life is found only on the earth.

At present, only indirect evidence of extraterrestrial life is available. This evidence, according to W.M. Sinton, is based on strong statistical arguments and on infrared spectroscopic analyses of Mars. Most investigators suggest that Mars is the one planet in our solar system on which life may be found. Photographs taken of Mars by Mariner 4 on July 14, 1965, did not reveal any signs of life on the planet, though they did not prove that no life exists there. The idea that Mars is the only planet that can support life in all the cosmic vastness of a universe containing about one trillion galaxies is a severe test of the imagination. See also ASTRONOMY.

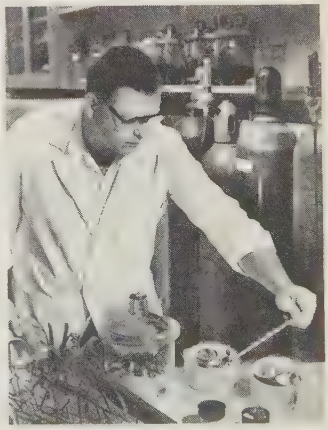
Antibiotics in Botanical Research. The effect of antibiotics on botanical processes has been under investigation since 1955. The assumption that a compound having a well-established specificity in microbiological or animal metabolism acts in a similar way on higher plants was challenged in 1965 by J.D. Mann. It has been shown that data bearing on the mode of action of antibiotics in lower plants or various animals may not apply to higher plants. Botanists have been using antibiotics increasingly for research in the last couple of years, and Mann warned that this may amount to a misuse of antibiotics. "Time devoted to such almost nonspecific inhibitors can be misleading, if not wasted effort," he said. He suggested some alternatives indicated by his data as better methods for investigating these botanical problems.

Antarctic Plant Life. Antarctic botanical research has revealed that lichens (algae and fungi) and mosses are the largest group of plants that grow in this remote region of the world. In contrast, the flowering plants on the Antarctic continent are limited to two species—*Colobanthus crassifolius*, a wild carnation, and *Deschampsia antarctica*, a type

GROWING PLANTS in stress environments is one method used to determine whether life can survive under the environmental conditions found on other planets. Ammonia gas is added above to the test bottle to simulate an atmosphere like that of Jupiter and of ancient earth.

IN THE MARS SIMULATOR II, plants are grown under conditions similar to those on Mars. The simulated atmosphere has no oxygen, little water, and temperatures from 70°F to −20°F. Mature plants did not survive under Martian conditions, but young shoots from the same species could adapt to the new environment.

UNION CARBIDE PHOTOS



PLANT TOLERATION OF COLD was tested by growing plants in soil kept at the temperature of liquid nitrogen (−320°F). The experiments showed that actively growing plants could not survive while more dormant plant forms, such as seeds and spores, were able to survive cold.

of grass—which grow only on the part of the Antarctic Peninsula nearest South America. Lichens, found more frequently than mosses, grow everywhere on the continent in the driest and least protected rocky localities. Most plants in the area reproduce asexually, and many have specialized means for increasing vegetative reproduction. The taxonomic and ecological data, though slight, form a beginning for understanding physio-ecological plant problems in the rigorous environment of the Antarctic Peninsula.

Shoot Development. In the general field of morphogenesis (development and growth), the shoot apex has been studied by botanists working with techniques borrowed from different disciplines. In the past, studies of shoot development have been concerned with investigations of progressively smaller segments of the apex. Recent data indicate that additional studies of nucleic acid metabolism within the cells of the embryonic tissue of the apex (apical meristem) may be very profitable in helping to understand shoot development.

Research with nucleic acids has shown that they are probably involved in several facets of shoot development and organization. Investigators have also suggested that it is important to consider the various activities of nucleic acids as components of the cells in the apical meristem, and then to consider the role of the apical meristem as a portion of the whole plant.

Genetics in the Soviet Union. The recent removal of T.D. Lysenko as director of the Institute of Genetics of the Academy of Sciences of the USSR seems to indicate the development of a less emotional and a more intellectual approach to biological science within the Soviet Union. The revival of non-Lysenko genetics in the USSR may well lead to new approaches toward genetical problems in that country.

Symposiums. The Gregor Mendel Memorial Symposium and the Symposium on Mutational Process were held in Brno and Prague, Czechoslovakia, in August 1965. Approximately 900 biologists attended these symposia in commemoration of the centenary of Mendel's genetical discoveries.

DAVID E. FAIRBROTHERS
Professor of Botany
Rutgers—The State University

BOUMEDIENNE, Houari. See biographical sketch under ALGERIA.

BOWLING. See SPORTS.

BOXING. See SPORTS.

BRANDT, Willy. See biographical sketch under GERMANY.

BRAZIL

BRAZIL · Information Highlights

Area: 3,286,470 square miles.
Population: 81,301,000 (July 1, 1965 est.).
Chief Cities (1960 census): Brasília, the capital (1965 est.), 330,000; Rio de Janeiro, 3,223,408; São Paulo, 3,164,804; Recife, 788,569.
Government: *President*—Gen. Humberto Castelo Branco (took office April 15, 1964); *Vice President*—José Maria Alkmim (took office April 15, 1964). *National Congress*—Senate, 66 members; party seating (1965): Social Democratic Party (PSD), 23; Brazilian Labor Party (PTB), 18; National Democratic Union (UDN), 17. Chamber of Deputies, 409 members; party seating (1965): PSD, 122; PTB, 97; UDN, 96.
Religious Faiths: Roman Catholics, 93% of population; others, 7%.
Education: *Literacy rate* (est.), 50% of population. *Total school enrollment* (1962)—10,095,273 (primary, 8,523,613; secondary, 1,074,813; teacher-training, 113,834; technical, 275,714; higher, 107,299).
Finance (1964): *Revenues*, $799,000,000; *expenditures*, $1,139,000,000; *monetary unit*, cruzeiro (official rate, 2,200 cruzeiros equal U.S.$1 as of Nov. 13, 1965).
Gross National Product (1961): $10,969,000,000.
National Income (1960): $9,166,000,000; average annual income per person, $130.
Economic Indexes: *Industrial production* (1962), 147 (1958=100); *agricultural production* (1964), 141 (1956–57=100); *cost of living* (1964), 1,270 (1958=100).
Manufacturing (metric tons, 1964): Petroleum products (1963), 14,033,000; cement, 5,564,000; sugar, 3,800,000; crude steel, 3,030,000; meat (1962), 1,989,000; coke, 996,000; cotton yarn (1963), 110,100; synthetic rubber, 33,000.
Crops (metric tons, 1963–64 crop year): Coffee, 1,560,000 (ranks 1st among world producers); cacao (1964–65), 132,000 (world rank, 4th); rice, 6,200,000 (world rank, 8th); citrus fruits (1964–65), 2,321,000 (world rank, 2nd); sugar, 3,360,000; sweet potatoes and yams, 1,546,000; cottonseed, 1,239,000.
Minerals (metric tons, 1964): Iron ore, 15,000,000 (ranks 10th among world producers); manganese, 1,080,638 (world rank, 4th); salt, 754,000 (world rank, 17th); bauxite, 168,000 (world rank, 20th); tin, 1,697 (world rank, 11th); gold, 134,326 troy ounces (world rank, 15th); gem diamonds, 175,000 carats (world rank, 11th).
Foreign Trade (1964): *Exports*, $1,433,000,000 (chief exports, 1964: coffee, $760,000,000; cotton, $108,000,000; cacao, $35,000,000); *imports*, $1,263,000,000 (chief imports, 1963: nonelectrical machinery, $240,660,000; petroleum, $176,360,000; wheat, $164,000,000). *Chief trading partners* (1963): U.S. (took 38% of exports, supplied 31% of imports); West Germany (took 8% of exports, supplied 9% of imports); Netherlands (took 8% of exports, supplied 1% of imports).
Transportation: *Roads* (1964), 311,510 miles (9,231 paved); *motor vehicles* (1964), 1,459,121 (automobiles, 761,004); *railways* (1963), 22,515 miles; *merchant vessels* (1964), 238 (1,146,000 gross registered tons); *airlines*, Panair do Brasil; Serviços Aéreos Cruzeiro do Sul, S.A.; VARIG; VASP; *principal airports*, Belo Horizonte, Brasília, Recife, Rio de Janeiro, Salvador, São Paulo.
Communications: *Telephones* (1964): 1,207,566; *television stations* (1964), 41; *television sets* (1964), 2,300,000; *radios* (1961), 4,700,000; *newspapers* (1963), 255 (daily circulation, 4,213,000).

After following a moderate policy during its first 18 months in power, Brazil's revolutionary government, headed by President Humberto Castelo Branco, took drastic action in October 1965 to override rising opposition. The government also continued to pursue an unpopular economic stabilization program that was beginning to show results after a temporary recession. International financial agencies, which provided heavy support, awaited the outcome of developments as Brazil began to undergo a major test of its capacity to restore political stability and resume economic growth.

Political Changes. The year opened with minor political victories for President Castelo Branco. His associate, Marshal Emilio Rodrigues Ribas, was installed as governor of the state of Goiás, after federal troops were used to remove Gov. Mauro Borges Teixeira, who was charged with subversion.

In February the president also prevented the reelection of Ranieri Mazzilli as president of the national Chamber of Deputies. Mazzilli, who was accused of corruption, had held the post for seven years and was a key figure in the Social Democratic party of former President Juscelino Kubitschek. He was replaced by Bilac Pinto, leader of the National Democratic Union party, which had supported the revolutionary overthrow of President João Goulart in April 1964.

The outcome of an election on March 21 for mayor of São Paulo, Brazil's principal industrial city, was regarded as a setback for the national government. The election was won by José Vicente Faria Lima, a retired air force general backed by former President Jânio Quadros.

The radical, "hard line" wing of President Castelo Branco's military supporters, fearing that other elections would result in victory for leaders of the opposition associated with former Presidents Goulart, Kubitschek, and Quadros, urged the postponement of forthcoming state elections. President Castelo Branco, however, decided to permit elections and prevailed on Congress to pass a "law of ineligibilities" disqualifying as candidates former cabinet members of the Goulart and Kubitschek governments, as well as certain state officials.

Gubernatorial Elections. The election for state governors on October 3 precipitated a major crisis in spite of the law of ineligibilities. Government candidates won in only four minor states, and candidates favorable to the government won in only another three. Two important posts, the governorships of the states of Guanabara and Minas Gerais, went, respectively, to Francisco Negrão de Lima and Israel Pinheiro, close associates of former President Kubitschek. These candidates had the backing of Kubitschek's Social Democratic party and ex-President Goulart's Brazilian Labor party. Candidates of this coalition also won in Mato Grosso and Goiás.

The defeat of Carlos Flexa Ribeiro, whom Gov. Carlos Lacerda selected as his intended successor in Guanabara, dealt a severe blow to Lacerda's presidential aspirations. An early supporter of the revolutionary regime, Lacerda was the announced candidate of the National Democratic Union.

Presidential Powers Broadened. After the elections, military leaders pressed for greater federal powers over state governments and for other measures aimed at suppressing the opposition. On October 27, after Congress failed to respond, President Castelo Branco issued a sweeping series of decrees which virtually granted him dictatorial powers. All 13 political parties were dissolved and a new party, the National Renovating Alliance, was formed. The new party combines conservative and moderate forces that support Castelo Branco and will work to maintain his policies and elect his successor. President Castelo Branco, declaring himself ineligible for reelection, decreed that the Congress, not popular vote, will choose a new president by Oct. 3, 1966.

The government resumed the power to impose federal control over states in cases of internal disturbance, to rescind elections, and to suspend the political rights of persons who opposed the revolution. The number of Supreme Court justices was increased from 11 to 16 to give the president power to influence the court. Acts of the government were removed from the jurisdiction of the civil courts, which several times had reversed the action taken by revolutionary tribunals.

Economic Planning and Government Actions. The economic "Plan of Action" came under criticism from nearly all quarters, although it influenced the decision of the United States, European countries, and international agencies to subscribe about $1 billion in financial assistance to Brazil in 1965. Devised by Planning Minister Roberto Campos and Finance Minister Otavio Bulhoes, the plan provided for inflation controls, a reduction in the federal budget, a more favorable balance of payments, and social reforms.

Complaints arose when the program caused a slump in the sale of automobiles and household appliances. Industrial workers were laid off, and several large firms were forced into bankruptcy, partly because of tighter credit regulations.

The gross national product, which had increased 2% in 1963, showed a decline of 3% in 1964. Agricultural production improved in 1965 because of good weather conditions, and, by August 1965, industrial production throughout the country showed signs of recovery.

The administration took several steps to encourage private enterprise and foreign investment, which had declined sharply prior to the revolution. Financial settlements were reached with the American and Foreign Power Company regarding the company's subsidiaries, which the Brazilian government had expropriated. Private companies were allowed to construct port facilities for the export of iron ore. President Castelo Branco canceled a 1964 decree expropriating private oil refineries and opened petroleum shale deposits to outside development.

Inflation. The rise in the cost of living, which had increased 87% in 1964, was held to a 41% increase in the first ten months of 1965. However, prices exceeded the limits imposed by the Plan of Action. Consequently, it was difficult to maintain the government's wage control policy, and wage increases of 30 to 49% were granted to public power and petroleum employees.

Under the new economic plan, the government attempted to combat inflation by voluntary cooperation; over 4,000 firms agreed to limit price increases in return for credits and tax concessions. This policy, however, was unsuccessful, and the government later reduced excise taxes to stimulate sales of durable goods.

As another anti-inflation measure, the government made efforts to reduce the budget deficit. On

WIDE WORLD

HUMBERTO CASTELO BRANCO, president of Brazil, overrode Congress and the Supreme Court to take on broad new presidential powers on Oct. 27, 1965. Considered to be an outstanding military leader, a great intellectual, and a staunch defender of democratic government, Castelo Branco assumed sweeping powers to prevent a powerful resurgence of extreme leftist forces. These forces had been removed from the government by the military coup which overthrew President João Goulart on April 11, 1964.

Castelo Branco was born in Fortaleza, in the state of Ceará, on Sept. 20, 1900. A member of a military family, he graduated with high honors from Brazil's Escola Militar do Realengo in 1921. After receiving special officer's training in France and the United States, he served during World War II on the general staff of the Brazilian Expeditionary Force in Europe. He became a lieutenant general in 1962. Congress elected him president on April 11, 1964. He was married in 1922 to Argentina Vianna (she died in 1963) and has two children.

WIDE WORLD

BRAZILIAN VOTERS in Rio de Janeiro elected an antigovernment candidate as governor of the state of Guanabara.

the advice of the International Monetary Fund, a new central bank was created to control paper money and deficit financing. The government reduced expenses by removing subsidies on petroleum and wheat imports. But losses on the state transport system, which accounted for 41% of the total budget deficit in 1964, continued to be high.

Debt Relief. Brazil's internal problems were complicated by a huge external debt, second only to India's among the developing countries of the world. After the Castelo Branco government defined its policies, the United States organized a $1 billion rescue operation. The Alliance for Progress provided $150 million for the stabilization of Brazil's finances, and $100 million for development projects. The U.S. Treasury committed $54 million in a foreign exchange loan, and the Export-Import Bank of Washington rescheduled $30 million of Brazil's debt payments to make reimbursement easier.

The International Bank for Reconstruction and Development (World Bank) approved the new plan and announced its first loan to Brazil in six years. The World Bank invested heavily in power development and sponsored a survey of Brazil's transportation needs. Together with the International Monetary Fund and the Inter-American Development Bank, the World Bank planned investments of $450 million in Brazil during the year.

Imports and Exports. Brazil's balance of payments improved. After a renegotiation of credits, Brazil achieved a balance of trade surplus of $70 million in 1964. Further import reductions were expected to produce a $300 million trade surplus in 1965.

A record sugar crop and good corn and cotton crops led to increased exports in 1965, but coffee sales lagged because of African and Central American competition. Unable to export her quota under the International Coffee Agreement, Brazil cut the price of coffee by one cent a pound in May to force a reduction in quotas affecting other exporting countries.

The government maintained the monetary unit, the cruzeiro at 1,825 per U.S.$1 during most of 1965, but on November 13 fixed a new rate of 2,200 cruzeiros per U.S.$1—a devaluation of about 19%. The government also announced that the monetary unit would be replaced on Jan. 1, 1966, by a new "strong" cruzeiro worth 1,000 of the old units.

Land Survey. In mid-December, the Brazilian government began a massive effort to register all rural landholdings in the country. Twenty thousand federal registrars were sent to rural townships in six states, to register all land claims and determine, through questionnaires, land use, marketing problems, labor conditions, and social hardships. The survey will provide the basis for agrarian reform and federal land tax. Castelo Branco's tax reform law, approved by Congress in November, established federal control over land value assessments and collection of land tax, formerly the prerogatives of municipalities.

Rocket Launching. On December 15, the Brazilian Space Activities Commission (CNAE) successfully launched its first sounding rocket from the space flight center of the National Aeronautics and Space Administration (NASA) in Greenbelt, Md. In an agreement signed in April 1965, CNAE and NASA agreed to cooperate in an investigation of the lower regions of the ionosphere.

Foreign Relations. Notwithstanding scattered opposition at home, the Brazilian government supported the United States in its intervention in the Dominican Republic in April. Brazil contributed 1,250 troops to the Inter-American Peace Force that was sent to Santo Domingo, and Gen. Hugo Penasco Alvim, a Brazilian, was named commander of the international force.

Relations between Brazil and Uruguay, which became strained when ex-President Goulart was given refuge in Uruguay and continued his political activity from there, worsened after the Dominican intervention. The Uruguayan government reacted angrily to reports that Brazil might intervene in Uruguay to prevent a Communist takeover there. (See also LATIN AMERICA.)

JAMES H. STREET
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Rutgers—The State University

BREWING INDUSTRY

For the fourth successive year, beer sales in the United States set a record in the fiscal year 1965. Sales totaled 100,306,727 barrels of 31 gallons each. This figure was 4,059,314 barrels higher than the record total of 96,247,413 barrels which had been established in the fiscal year 1964.

The brewing industry also set all-time high monthly sales records in March, May, and June of 1965, and in the first six months of the calendar year 1965. Brewers' sales from January to June 1965 climbed to 49,329,522 barrels, an increase of 3.5% or 1,662,757 barrels over the record set during the same period in 1964.

About 8% of the population of the United States lives in areas where the sale of beer and ale is prohibited. The 1,136 local-option elections in 1964 increased by 56,213 the numbers of persons living in areas where it is legal to sell these alcoholic beverages.

In the calendar year 1964, as in each of the previous nine years, brewers paid more than $1 billion in state and federal taxes. They contributed over $6 billion to the national economy. This figure included more than $210 million for agricultural products and $530 million for kegs, bottles, cans, related materials, and containers. It also included $485 million in direct salaries and wages, as well as substantial amounts in fringe and other benefits.

HENRY B. KING
President, United States Brewers Association, Inc.

BREZHNEV, Leonid Ilyich. See biographical sketch under UNION OF SOVIET SOCIALIST REPUBLICS.

BLACK STAR

THE VERRAZANO-NARROWS BRIDGE, majestic link between Brooklyn and Staten Island, N.Y., carried 17,079,675 vehicles—35% above forecasts—in its first year.

BRIDGES

Bridge builders around the world continued to construct major spans in 1965, and officials announced plans for many new bridges. In the United States, bridge building received further impetus as the huge interstate highway construction program made impressive headway and Congress passed legislation for a federally sponsored program to improve mass transit in major metropolitan areas.

Delaware Bridges. Builders began erecting steel in the shadow of the Delaware Memorial Bridge for the 418-foot-high towers of a twin span. The new bridge will be basically identical to the present bridge, built in 1951, except in price—$76 million for the new one, as against $40 million for the old one. Located at the southern terminus of the busy New Jersey Turnpike, each bridge will handle one-way traffic, beginning in 1967.

Four future Delaware crossings were announced during 1965. The Delaware River Port Authority approved construction of a $45 million bridge to link Philadelphia, Pa., and Delair, N.J., and a $55 million span between Chester, Pa., and Bridgeport, N.J. The Delaware River Joint Toll Bridge Commission announced plans for two bridges—a high-level, toll span between Bristol, Pa., and Burlington, N.J., and a replacement for the 95-year-old bridge between Trenton, N.J., and Morrisville, Pa.

Newport-Jamestown Bridge. Pier construction will begin in 1966 for a suspension bridge over the East Passage of Narragansett Bay to link Newport and Jamestown, R.I. The 2-mile crossing will have a main suspended span of 1,600 feet with 687-foot-long side spans. The rest of the bridge is trestle-type construction. Scheduled for completion in May 1968, the bridge will cost $44 million.

Lake Ponchartrain Twin. In the fall of 1965 the Greater New Orleans Expressway Commission signed contracts to begin design work on a twin for the world's longest overwater crossing, the 24-mile Lake Ponchartrain Causeway. The new bridge, paralleling the existing structure, will cost an estimated $35 million.

Bridge-tunnel Twin. Virginia announced plans to build a second two-lane Hampton Roads bridge-tunnel adjacent to the present crossing between Norfolk and Hampton. Construction will start when revenue bonds used to finance the original structure are paid off, probably in 1972. An interesting sidelight is that engineers estimate the new twin crossing will cost only $49 million, compared with $62 million for the existing bridge-tunnel. The reduction in construction cost was achieved because the new tunnel section will surface at the same artificial islands as the old tunnel. The islands, however, will be enlarged.

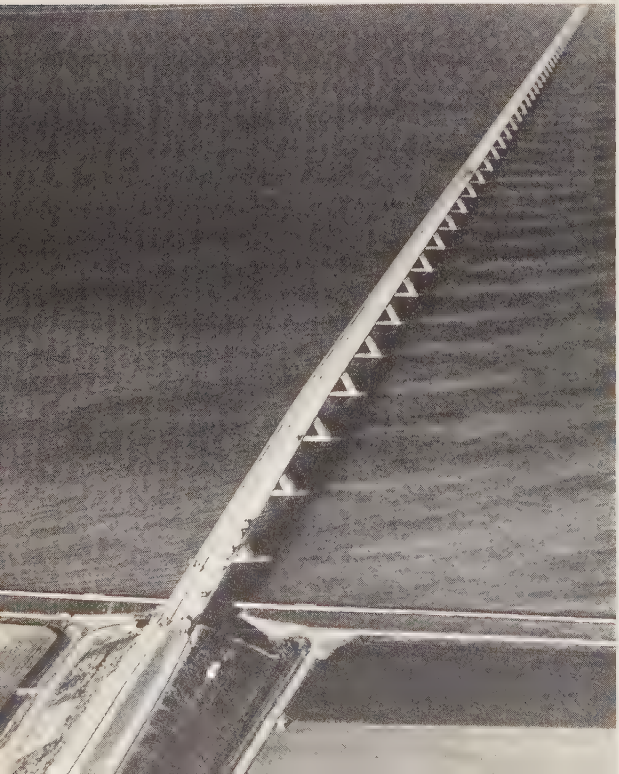
Orthotropic Bridges. Ironworkers began to erect steel for two bridges—one in San Francisco, the other in St. Louis—that are contenders to become the nation's first major orthotropic span. (Bridges of orthotropic design have a stiffened steel plate deck that acts both as a roadway deck and as the top flange of the main girders and floorbeams.) The San Francisco structure, the $70 million San Mateo-Hayward Bridge crossing lower San Francisco Bay, will be 7.4 miles long. A 9,650-foot-long, high-level section of the bridge is mostly orthotropic plate deck on twin, steel-box girders, with the high-level section meeting completed concrete trestle sections at either end. The steel part of the bridge will have 750-foot-long box girders in its center span, which will be the third longest in the world. The St. Louis bridge, the Poplar Street Bridge over the Mississippi River, although a major structure, will not be as spectacular as the California span because of its shorter length.

Golden Gate Double Deck. Directors of the Golden Gate Bridge agreed in principle in 1965 to add a second deck to the famous bridge. Considerable engineering design work has been done, and the final design probably will be selected in 1966. Also in the San Francisco Bay area, the state began to study the feasibility of constructing two other bridges—one to the north, between San Francisco and Marin County, and the other to the east, between the San Francisco Peninsula and Alameda County.

Long Island Sound Crossing. Consulting engineers told the New York State government that it would be feasible to build a 10-mile-long highway bridge linking the tip of Long Island with Connecticut. The engineers said that the crossing, estimated to cost $206 million, should also carry railroad tracks.

EUROPE'S LONGEST BRIDGE, the Oosterscheldebrug, with 52 spans and 162 pillars in its 3-mile length, opened in 1965 in the Netherlands. It is part of the Scheldt River Delta project that protects Zeeland Province against floods.

KEYSTONE



Canada. Montreal's 1967 world's fair has prompted the construction of two bridges connecting the island site of the fair with Montreal proper, which also is situated on an island. Although relatively small, both spans will be notable. One, a 2,265-foot-long orthotropic plate span, was being completed in early 1966. The other, a 688-foot-long stayed-girder structure, was under way.

Construction will start in 1966 on a 9-mile bridge-tunnel across the Northumberland Strait between New Brunswick and Prince Edward Island. The crossing will include a 3-mile, high-level, double-deck bridge section and a mile-long tunnel.

Construction started in 1965 on a 3,412-foot suspension bridge over the St. Lawrence River at Quebec City. The structure, with a 2,190-foot main span and a 90-foot-wide deck, will be 150 feet above the water.

Denmark. Denmark's Ministry of Traffic announced an international design competition for either a bridge or a tunnel linking the islands of Zealand and Fyn. The islands are separated by the 12.5-mile-wide Great Danish Belt, and the connecting ferry ride takes 45 minutes. Designs must be submitted by April 1966, but construction is not likely to start for five years.

Portugal. In 1965, cable spinners finished the two 23-inch-diameter cables that will support the 3,323-foot main span of a bridge across the Tagus River at Lisbon. The completed bridge will have the longest suspended span in Europe. Work also was under way on the stiffening trusses and deck for the bridge, whose length from anchorage to anchorage will be second only to the bridge across Mackinac Straits.

Italy. Work continued in the Polcevera River Valley, near Genoa, on a 4-lane highway bridge that is notable for both beauty and design. Riccardo Morandi, who designed the Lake Maracaibo Bridge, also designed this 3,358-foot-long bridge that vaults across the valley on 10 free-standing concrete structures. The bridge also includes an elevated interchange and a 3,300-foot approach tunnel.

Egypt. The United Arab Republic completed a record-setting railroad swing bridge over the Suez Canal. The bridge consists of twin swing spans, each 520 feet long. The horizontal distance between turntable centerlines at each edge of the canal is 548 feet—18 feet longer than the Fort Madison, Ia., swing bridge over the Mississippi River.

Venezuela. The Gen. Rafael Urdaneta Bridge over Lake Maracaibo, broken in two during 1964 when an oil tanker damaged two of its graceful concrete towers and dumped three precast spans into the lake, was reopened to traffic during 1965. Ferries, which the bridge had replaced in 1962, went back into service during the 6-month reconstruction period.

Workers began erecting tower steel for a bridge over the Orinoco River that will be the longest suspension bridge in South America. The bridge's center span will measure 2,336 feet.

Brazil. The Mauricio Joppert Bridge, a 7,481-foot prestressed concrete girder span over the Paraná River near São Paulo, was opened to traffic during 1965. In South America, only the bridge across Lake Maracaibo in Venezuela is longer.

WILLIAM W. JACOBUS, JR.
Associate Editor, "Engineering News-Record"

BRITISH COLUMBIA

The year 1965 in British Columbia was highlighted by large capital investments. Almost $1.9 billion was expended by government and industry in initiating and expanding power projects and other industrial enterprises.

Construction. Work began in midyear on the $77 million Portage Mountain powerhouse of the Peace River Power Project, and tenders were called for building transmission facilities. On May 19, ceremonial blasting at the site of Duncan Dam, 55 miles north of Nelson, marked the beginning of construction of the Columbia River Power Project. Two additional dams—the Mica, north of Revelstoke, and the Arrow, near Castlegar—are scheduled for completion by 1973.

As a result of the Peace River and Columbia River projects, the province will acquire a 680-square-mile reservoir, to be known as Peace Lake. This will be the largest lake in British Columbia.

The 78-mile extension of the Pacific Great Eastern Railway into Fort St. James neared completion, and surveys were announced for three further extensions: a 21-mile line from Kennedy to Morfee Lake; a 50-mile branch extending north from Fort St. John; and a 64-mile extension of the Fort St. James branch to Takla Lake.

BRITISH COLUMBIA · Information Highlights

Area: 366,255 square miles.
Population: 1,818,000 (Oct. 1, 1965, est.).
Chief Cities (1961 census): Victoria, the capital (54,941); Vancouver (384,522); New Westminster (33,654); North Vancouver (23,656); Nanaimo (14,135); Prince George (13,877); Penticton (13,859); Kelowna (13,188).
Government: *Chief Officers*—lieutenant governor, George R. Pearkes; premier and min. of finance, William A.C. Bennett (Social Credit party); prov. secy., Wesley D. Black (SC); atty. gen., Robert W. Bonner (SC); min. of educ., Leslie R. Peterson (SC); chief justice, Henry I. Bird. *Legislature*—Legislative Assembly (convened Jan. 21, 1965), 52 members (33 Social Credit, 14 New Democratic, 5 Liberal).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 369,872 pupils (13,998 teachers); private, 23,242 (1,018); Indian, 5,987 (237); college and university (fall 1964), 18,423. *Public school expenditures* (1963)—$167,170,000; average teacher's salary, $5,949.
Public Finance (fiscal year 1965 est.): *Revenue,* $400,210,000 (sales tax, $154,420,000; income tax, $82,969,000; federal funds, $1,873,000). *Expenditures,* $404,600,000 (education, $106,980,000; health and welfare, $100,650,000; transportation and communications, $73,650,000).
Personal Income (1964): $3,614,000,000; average annual income per person, $2,079.
Public Assistance (fiscal year 1965 est.): $32,040,000 (aged and blind, $14,730,000; dependents and unemployed, $10,300,000).
Labor Force (1961 census, agriculture and manufacturing only): *Agricultural,* 23,290; *manufacturing,* 113,019.
Manufacturing (1962): *Value added by manufacture,* $1,022,509,000 (transportation equipment, $43,022,000; primary metals, $78,974,000; nonelectrical machinery, $15,777,000; electrical products, $12,338,000; fabricated metals, $52,238,000; food and products, $180,836,000).
Agriculture (1964 est.): *Cash farm income,* $150,083,000 (livestock, $95,326,000; crops, $52,158,000; govt. payments, $160,000). *Chief crops* (cash receipts)—fruits, $23,483,000 (ranks 2nd among the provinces); vegetables, $8,635,000 (rank, 3rd); wheat, $3,421,000 (rank, 4th); barley, $2,717,000 (rank, 4th); potatoes, $2,547,000 (rank, 5th); flaxseed, $44,000 (rank, 5th).
Mining (1964 est.): *Production value,* $269,293,797. *Chief minerals* (tons)—zinc, 207,656 (ranks 2nd among the provinces); copper, 57,506 (rank, 3rd); lead, 134,160 (rank, 1st); iron ore, 2,167,559 (rank, 4th); sand and gravel, 22,272,170 (rank, 3rd); crude petroleum, 11,726,180 barrels (rank, 3rd); natural gas, 118,959,880,000 cubic feet (rank, 2nd).
Forest Products (1964): Lumber, 6,606,000,000 board feet (ranks 1st among the provinces); plywood, 2,086,000,000 (rank, 1st).
Fisheries (1964): *Commercial catch,* 705,437,000 pounds ($47,214,000). *Leading species*—salmon, 118,593,000 pounds ($28,841,000); halibut, 35,755,000 ($8,840,000).
Transportation (1963): *Roads,* 35,072 miles (26,699 surfaced); *motor vehicles,* 662,453; *railroads,* 4,329 miles; *airlines,* 5 (45 airports).
Communications (1963): *Telephones,* 666,190 (including Yukon Territory); *television stations,* 8; *radio stations,* 35; *newspapers,* 16 (daily circulation, September 1964, 542,024).

CANADIAN PRESS

BRITISH COLUMBIA'S NEWEST UNIVERSITY, named in honor of Simon Fraser, was opened in Burnaby on Sept. 9, 1965, with formal convocation ceremonies in the quadrangle.

Economy. The province's economy maintained a continuing pattern of rapid growth throughout 1965. The installation of steel furnaces at Kimberley marked the completion of an integrated iron-steel operation. Several new base metal mines went into production. One on Boss Mountain and another near Endako, together involving a $30 million expenditure, promise to make British Columbia the major Canadian producer of molybdenum. A substantial enlargement of pulp and paper capacity in the province was supported by major investments from Great Britain, West Germany, Sweden, Denmark, and the United States.

Legislature. The 1965 Legislative Assembly authorized a provincial medical insurance plan that became effective on September 1. Initial coverage was extended to 95,000 families.

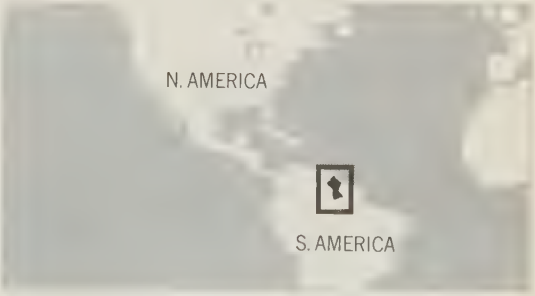
A three-member commission was appointed on August 5 to redraw legislative electoral districts.

Education. A fourth provincial university, Simon Fraser University, was opened in Burnaby in September.

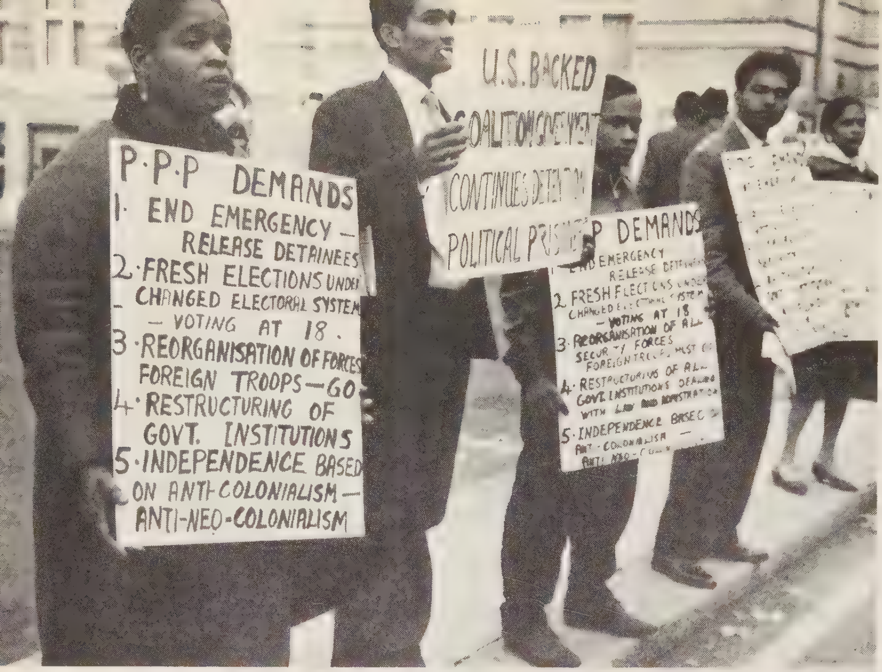
M. GLOVER
Director, B.C. Bureau of Economics and Statistics

BRITISH COMMONWEALTH. See COMMONWEALTH OF NATIONS.

BRITISH GUIANA



British and Guianese leaders, meeting in London in November 1965, made plans for British Guiana to become an independent nation in 1966. In preparation for independence, the government of Premier Forbes Burnham worked to strengthen the economy


U.S. BACKED
COALITION GOVERNMENT
CONTINUES DETENTION
POLITICAL PRISONERS
P·P·P DEMANDS
1· END EMERGENCY – RELEASE DETAINEES
2·FRESH ELECTIONS UNDER CHANGED ELECTORAL SYSTEM – VOTING AT 18.
3·REORGANISATION OF FORCES FOREIGN TROOPS–GO
4·RESTRUCTURING OF GOVT. INSTITUTIONS
5·INDEPENDENCE BASED ON ANTI-COLONIALISM– ANTI-NEO-COLONIALISM
P DEMANDS

KEYSTONE

BRITISH GUIANA independence talks, held in London in November, are picketed by members of Guiana's leftist People's Progressive Party. Party leaders refused to take part in the talks between English and Guianese officials.

and ease racial bitterness. The coalition government, composed of Burnham's People's National Congress (PNC), representing British Guiana's Negroes, and the United Force (UF), backed by the European minority, held only a five-vote margin in the unicameral legislature. The opposition was led by ex-Premier Cheddi B. Jagan, head of the People's Progressive Party (PPP), which represents most of the country's East Indian population.

BRITISH GUIANA · Information Highlights

Area: 83,000 square miles.

Population: 628,000 (July 1, 1964, est.).

Chief Cities (1960 census): Georgetown, the capital, 72,965; New Amsterdam, 14,046.

Government: *Governor General*—Richard Luyt; *premier*—Linden Forbes Burnham (took office Dec. 14, 1964). *Parliament*—House of Assembly, 53 members; party seating (1965), People's Progressive Party, 24; People's National Congress, 22; United Force, 7.

Religious Faiths: Christians, 57% of population; Hindus, 33%; Muslims, 9%.

Education: *Literacy rate* (1965)—80% of population. *Total school enrollment* (1962)—145,814 (primary, 135,784; secondary, 8,443; technical, 1,363; higher, 224.

Finance (1964 est.): *Revenues*, $40,700,000; *expenditures*, $40,600,000; *public debt* (1963), $74,300,000; *monetary unit*, West Indian dollar (1.714 dollars equal U.S.$1).

Gross National Product (1960): $146,000,000.

National Income (1963): $135,000,000; average annual income per person, $221.

Cost of Living Index (1964): 111 (1958=100).

Manufacturing (1963): Sugar (1964), 340,000 metric tons; beer, 2,820 metric tons; lumber, 65,000 cubic meters.

Crops (metric tons, 1964–65 crop year): Rice, 264,000.

Minerals (metric tons, 1964): Bauxite, 2,508,000 (ranks 4th among world producers); manganese, 118,756 (rank, 15th); gem diamonds, 60,000 carats (rank, 13th); gold, 2,111 troy ounces.

Foreign Trade (1964): *Exports*, $95,000,000 (chief exports, 1961: cane sugar, unrefined, $33,200,000; bauxite and concentrates, $23,700,000; rice, $13,200,000); *imports*, $87,000,000 (chief imports, 1961: nonelectrical machinery, $15,900,000; petroleum products, $7,500,000; textiles, yarn, fabrics, $6,500,000). *Chief trading partners* (1961): Great Britain (took 25% of exports, supplied 38% of imports); U.S. (took 21% of exports, supplied 20% of imports); Canada (took 26% of exports, supplied 7% of imports).

Transportation: *Roads* (1964), 879 miles (231 paved); *motor vehicles* (1964), 15,200 (automobiles, 10,600); *railways* (1963), 79 miles; *airline*, British Guiana Airways Corp.

Communications: *Telephones* (1964): 10,100; *radios* (1963), 40,000; *newspapers* (1962), 4 (daily circulation, 48,000).

Guyana. At a 17-day conference held in London in November, it was agreed that the colony would become the independent nation of Guyana on May 26, 1966. The new country will retain the proportional electoral system under which Premier Burnham's moderate government replaced the leftist

PREMIER FORBES BURNHAM (*left*), head of British Guiana's coalition government, was faced in 1965 with the opposition of leftist ex-Premier Cheddi Jagan (*right*) and his People's Progressive Party.

PICTORIAL PARADE

UPI

IS BRITAIN INTERESTED IN DEMOCRACY OR WHITE SUPREMACY ?

BRITISH GUIANANS, looking forward to their nation's independence in 1966, demonstrated against the unilateral declaration of independence proclaimed by Rhodesia's white-controlled government in 1965.

PICTORIAL PARADE

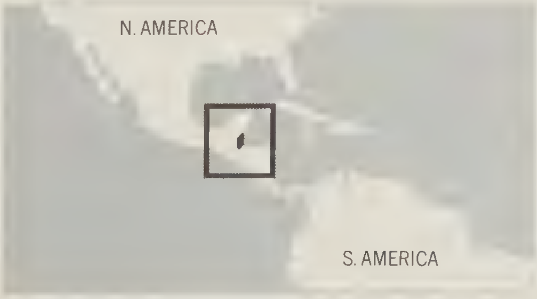
government of Cheddi Jagan in 1964. Jagan and the PPP boycotted the conference.

Government. Premier Burnham named Peter D'Aguiar, head of the UF, minister of finance in his 12-man cabinet, a move that helped strengthen the coalition government. Jagan and the 23 other PPP members boycotted the Assembly for five months.

Economy. The government began work on a five-year economic development plan, and on a crash program of public works in rural areas. The United States, Britain, and Canada agreed to give economic aid for the program.

A small sugarcane crop and falling prices on the world market hurt British Guiana's economy in 1965. Rice exports also dropped because Cuba, formerly a major customer, stopped buying rice after the 1964 elections ousted the Jagan government.

BRITISH HONDURAS



Premier George Price and the People's United party were returned to power on March 1, 1965, in the first elections held under the 1963 constitution that gave the country internal self-government.

Elections. Campaigning on a platform of complete and early independence from Britain, Premier Price easily defeated Philip Goldson, leader of the National Independence party, in the March elections. Goldson advocated that independence be postponed until the country achieved greater economic progress. He and one other member of the National Independence party won seats in the 18-member House of Representatives.

BRITISH HONDURAS · Information Highlights

Area: 8,867 square miles.
Population: 106,000 (July 1, 1965, est.).
Chief Cities (1960 census): Belize, the capital, 32,690; Stann Creek, 5,287; Corozal, 3,171; Orange Walk, 2,157.
Government: *Governor General,* Sir Peter Stallard; *premier,* George Price. *Parliament*—National Assembly, 26 members; Senate, 8 members (appointed by the governor); House of Representatives, 18 members; party seating (1965): People's United party, 16; National Independence party, 2.
Religious Faiths: Roman Catholics, 60% of population; others, 40%.
Education: *Literacy rate* (1960)—87% of population aged 15 and over. *Total school enrollment* (1962)—28,036 (primary, 25,893; secondary, 1,980; teacher-training, 34; technical, 129).
Finance (1964 est.): *Revenues,* $5,800,000; *expenditures,* $6,500,000; *public debt* (1962), $3,200,000; *monetary unit,* British Honduras dollar ($BH1.429 equal U.S.$1).
Cost of Living Index: (1964), 104 (1958=100).
Manufacturing: Sugar (1964), 40,000 metric tons; lumber (1963), 41,000 cubic meters.
Crops (metric tons, 1964): Oranges, 32,000; grapefruit, 12,000.
Foreign Trade (1963): *Exports,* $13,000,000 (chief exports, 1962: sugar, unrefined, $2,694,000; mahogany lumber, $1,103,000; fruits, $983,000; chicle, $274,000); *imports,* $19,000,000 (chief imports, 1962: milk and cream, $794,000; automobiles, $694,000; clothing, $687,000). *Chief trading partners* (1962): U.S. (took 30% of exports, supplied 48% of imports); Britain (took 43% of exports, supplied 25% of imports).
Transportation: *Roads* (1964), 1,084 miles (199 paved); *motor vehicles* (1964), 2,622 (automobiles, 1,512).
Communications: *Telephones* (1964): 992,000; *radios* (1963), 6,000; *newspapers* (1962), 2 (daily circulation, 5,000).

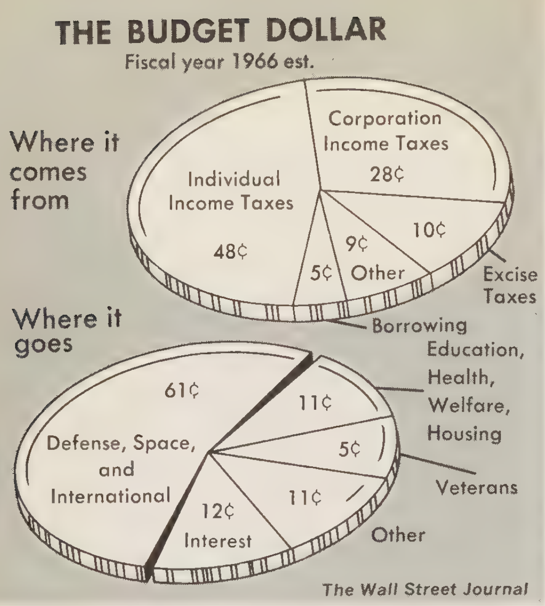
New Capital Planned. Plans for a new capital city to replace Belize were announced on March 31 by British Colonial Secretary Anthony Greenwood. The new capital will be situated 50 miles inland from Belize, which was badly damaged by hurricanes in 1961. Grants and loans from Britain will supply most of the $112 million needed for the new city.

Sovereignty Dispute. Guatemala and Britain, both claiming sovereignty over British Honduras, agreed in 1965 to accept United States mediation to settle the dispute. Bethuel M. Webster, a lawyer, was appointed mediator. Preliminary talks began in Washington, D.C., in November.

Budget. The 1965 budget totaled $11,529,000. A $5,110,000 deficit was paid by Britain. Government salaries, the largest budget item, included 70% of the nation's salaried workers.

BRITISH TERRITORIES. See COMMONWEALTH OF NATIONS.

BUDDHISM. See RELIGION—*Oriental Religions.*



The Wall Street Journal

BUDGET, U.S.

Net receipts of the federal government in the fiscal year ended June 30, 1965, amounted to $93,044,443,313, compared with $89,458,664,071 in the fiscal year ended June 30, 1964. Net expenditures were $96,518,462,919 in fiscal year 1965, as against $97,684,374,794 in fiscal year 1964. The 1965 budget deficit was $3,474,019,605, as compared with the 1964 deficit of $8,225,710,723, a reduction of almost 60%.

Both receipts and expenditures showed a substantial improvement over the estimates made in January 1965. Receipts were $1.8 billion higher than the January estimate and expenditures were $1 billion lower, reducing the administrative budget deficit by $2.8 billion, or nearly half the amount of the earlier estimate. The 1965 deficit of $3.5 billion was the smallest administrative budget deficit in five years. Administrative budget expenditures in fiscal year 1965 were over $1 billion less than in fiscal year 1964—the first year-to-year reduction of expenditures in five years. The reduction reflected the efforts of government agencies, at President Johnson's direction, to make increased economies in operations. In spite of the income tax reduction in 1964, tax collections in 1965 were higher than in 1964, largely due to the nation's increased economic activity.

Table 1—FEDERAL GOVERNMENT CASH RECEIPTS FROM AND PAYMENTS TO THE PUBLIC, FISCAL YEARS 1965 AND 1964

(In millions)

Description	1965	1964
Federal receipts from the public:		
Administrative budget receipts (net)	$93,044	$89,459
Trust and other receipts (net)	31,055	30,331
Deduct intragovernmental and other noncash transactions	4,415	4,259
Total federal receipts from the public	119,685	115,530
Federal payments to the public:		
Administrative budget expenditures (net)	96,518	97,684
Trust fund and other expenditures (net)	29,627	28,885
Deduct intragovernmental and other noncash transactions	—3,776	—6,237
Total federal payments to the public	122,369	120,332
Excess of payments to the public	2,684	4,802

Note: Figures are rounded to nearest million and will not necessarily add to totals.

Table 2—BUDGET RECEIPTS AND EXPENDITURES FISCAL YEARS 1965 AND 1964

(In millions)

Description	1965 (Actual)	1964 (Actual)
Receipts by source		
Individual income taxes	$48,792	$48,697
Corporation income taxes	25,452	23,493
Excise taxes	10,918	10,211
Miscellaneous receipts	4,596	4,076
All other receipts	4,154	3,646
Subtotal	93,913	90,123
Deduct interfund transactions	869	664
Net receipts	93,044	89,459
Expenditures by major agencies		
Legislative branch and the judiciary	239	217
Executive Office of the President	24	23
Funds appropriated to the president:		
International financial institutions	320	112
Office of Economic Opportunity	210	...
Public works acceleration	322	332
Foreign assistance, economic	2,036	1,979
Foreign assistance, military	1,204	1,485
Other	184	193
Agriculture:		
Commodity Credit Corporation	4,442	5,100
Other	2,888	2,797
Commerce	757	686
Defense:		
Military	46,178	49,760
Civil	1,234	1,153
Health, Education, and Welfare	5,739	5,498
Interior	1,205	1,124
Justice	357	328
Labor	480	370
Post Office	800	578
State	380	347
Treasury:		
Interest on the public debt	11,354	10,666
Other	1,383	1,281
Atomic Energy Commission	2,624	2,765
Export-Import Bank of Washington	—357	—702
Federal Aviation Agency	795	751
General Services Administration	632	592
Housing and Home Finance Agency	244	328
National Aeronautics and Space Administration	5,094	4,171
Veterans Administration	5,488	5,478
Other independent agencies	1,073	861
District of Columbia	61	57
Subtotal	97,388	98,348
Deduct interfund transactions	869	664
Total expenditures	96,519	97,684
Administrative budget deficit	3,474	8,226

Note: Figures are rounded to nearest million and will not necessarily add to totals.

Public Debt. The total public debt and guaranteed obligations of the federal government on June 30, 1965, amounted to $317,864,225,033, compared with $312,525,891,182 at the close of fiscal year 1964. Interest payments on the public debt amounted to $11,345,312,422 in 1965, compared with payments of $10,665,858,126 in the previous fiscal year. The per capita debt was $1,633.34 at the end of fiscal year 1965, compared with $1,626.73 at the end of fiscal year 1964.

Receipts and Payments. The flow of money between the public and the federal government (see Table 1) is sometimes called the consolidated cash budget. To derive the total receipts and payments, transactions of trust funds are consolidated with budget transactions. Transactions between them, such as interest paid by the Treasury Department to trust funds, are eliminated, along with some other noncash transactions. For example, interest that accrues on savings bonds is counted as a budget expenditure at the time of accrual, but because the interest is not paid in cash until the bond is redeemed, the consolidation eliminates the interest accruals and includes the interest paid on redeemed bonds. As a result, the figures in Table 1 are not the same as the figures for Treasury cash deposits and withdrawals as presented in the daily treasury statement. Government transactions with commercial banks are not included in Treasury cash deposits and withdrawals, but are reflected in Table 1.

TREASURY INFORMATION SERVICE

BUILDING AND CONSTRUCTION

Activity in the new construction continued to increase in 1965, as it has since 1960, but not as much as the country's economic growth in general. A 3% gain over 1964 boosted spending for construction to $68.1 billion in 1965—a record high—but, because costs increased between 2 and 3%, the physical volume of work put in place registered only a nominal increase over 1964.

Except for new housing, a spurt in the number of construction projects begun in 1965 left an unusually large volume of work to be completed in 1966. Unemployment rates in the industry, generally higher than for the economy as a whole, declined rapidly during the year, nearing the 5% mark.

Because new residential construction outlays failed to increase significantly, the upward trend in privately owned construction was only 4%. Public construction showed a slightly smaller rate of gain—2%—with an almost even mixture of gains and losses. Nevertheless, a net increase of over $300 million brought public spending over the $20 billion mark for the first time.

Private Construction. Private construction, which in 1965 totaled almost $48 billion, showed an increase of $2 billion during the year. There was an increase of 12% for all types of nonresidential buildings, and of 6% for public utilities.

In spite of a drop in starts, the amount spent for new housing units in 1965—$20.7 billion—was slightly higher than in 1964, largely because more of the starts were of the high-priced single-family type. The 1,495,000 private new farm and nonfarm units started represented a drop of about 60,000 from 1964.

The market for new homes, however, was somewhat stronger in 1965 than the number of starts indicated. One-family home sales increased, and the inventory of unsold homes decreased. Mortgage money was in adequate supply, despite the inching up of interest rates. While vacancy rates were stable, foreclosures continued to increase slightly. Conventional financing was still dominant, providing funds for five sixths of all starts.

In industrial construction, a 21% gain brought spending to a new high of over $4 billion—$700 million more than in 1964.

Commercial construction had its greatest increase in a decade—14%. Within this group, stores and shopping centers led with 26% higher outlays, while office buildings and warehouse construction showed only a nominal 4% gain. The office building group showed the smallest overall gain in 15 years.

Public utilities construction accelerated more than in most years. Of its leading categories, telephone construction was up 13%, and electric power construction was up 8%.

Public Construction. Increased federal aid for such facilities as schools and hospitals contributed to a gain of over $300 million (up 2%) in publicly owned construction. New classroom construction was up $368 million, with total outlays reaching $3.7 billion. Of the other leading categories, public hospital construction was up 13%, and public residential construction was up 21%.

Highways, still the largest public construction category, dropped to $7.1 billion—a decrease of 1%, due to a toll road expenditure decline. Progress on the interstate highway program continued about as scheduled. Sewer and water outlays declined, but the largest decline—15%—was in public administration and service buildings.

Building Permits and Regional Trends. The 1965 permit valuation statistics, covering 3,000 places, showed the Western states to have dropped 8% from 1964—the only region to register a decline. The South and North-Central areas showed 4 and 7% gains, respectively; and the Northeast was up 12%.

The mainstays of construction in places covered by permit systems were industrial and office buildings and stores. In all regions except the South, the valuation of office space permits was up in 1965 by more than 33%.

The surge in industrial building was indicated by the building permit valuations of 1965, which were up 16% nationally. Most of this increase was in the North Central states.

Only about half of the states showed an increase in new permit valuations in 1965, whereas in 1964 all but a few states were doing better than the year before. The largest gainers were states with a relatively small volume of permits—Vermont, West Virginia, New Hampshire, Hawaii, and Delaware, which had gains of from 27 to 63%. Kansas and Arizona, with about one third declines, showed the largest losses. California, with permits valued at about one fifth of the U.S. total, was down by 8%.

Costs and Prices. Overall construction costs in 1965 rose by about 3%, mainly because of rising wage costs. Building materials prices also crept up for the first time since 1960. The overall favorable price picture was marred only by strong price pressures in the metal products area because of greater military requirements for Vietnam.

Employment and Earnings. Employment in contract construction continued its upward course throughout 1965. The gain of about 4% was due mainly to increased employment by building contractors. Virtually no employment rise was shown by highway contractors.

Average hourly earnings for all construction workers rose by 4%. Consequently, although the weekly hours for working remained unchanged, average weekly earning increased.

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Chief Economist, Building Materials and Construction Industries Division
Business and Defense Services Administration

BULGARIA

In 1965, the pro-Soviet leaders of the Bulgarian Communist party crushed a conspiracy led by nationalists and pro-Chinese elements. The country retained close ties with the USSR, but relations with the United States continued to be strained. During the year Bulgaria's economic position improved.

Antigovernment Conspiracy. An attempted coup d'état against the government that involved government officials and army officers of high rank was revealed in April. Ivan Todorov-Gorunya, a member of the Communist party's Central Committee, shot himself fatally shortly before the police attempted to arrest him. Among those arrested were Gen. Tsvetko Anev, commandant of the Sofia military district, and Tsolo Krustev, a specialist in African-Asian affairs in the Foreign Ministry.

Premier Todor Zhivkov responded sharply to rumors that the conspirators wished to loosen ties between Bulgaria and the Soviet Union. In a speech on April 28 he said: "In the West, at this moment, the reactionaries are screaming about a plot to separate us from the Soviet Union. . . . There is no

EASTFOTO

BULGARIAN PRESIDENT Traikov pins medal on Aleksei Leonov during Soviet cosmonaut's visit to Sofia on May 22.

force that can do that." In a speech on May 8 the premier branded the plotters as "contemptible adventurers, careerists, and unprincipled power-seekers."

In spite of these pronouncements, the nature of the conspiracy remained obscure. Apparently the two anti-Soviet factions within the party—one favors more independence for Bulgaria, and the other supports Communist China—united to instigate the plot to seize control from Zhivkov, a faithful adherent to the Moscow line. This assumption was dispelled somewhat on July 16, when Premier Zhivkov told five visiting Austrian journalists that the plotters were pro-Chinese; he did not mention the other faction.

The convicted conspirators received surprisingly light sentences. On June 19, Anev was sentenced to 12 years and Krustev to 15 years in prison. Seven other persons were sentenced to terms of from 3 to 15 years.

After these events, the political security apparatus was reorganized. In July, a State Security Committee was established as a special government agency under direct control of Premier Zhivkov.

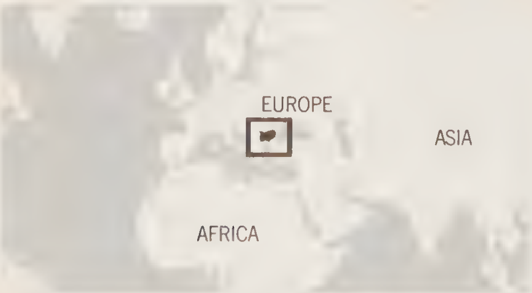
Foreign Relations. The close ties between the Soviet Union and Bulgaria were strengthened in 1965 by the victory of Premier Zhivkov over the anti-Soviet conspirators. In January, Bulgaria and the USSR signed an agreement on cultural and scientific cooperation for 1965–66. It emphasized scientific cooperation but also encompassed publishing, radio, television, athletics, and higher education. Travel visas between citizens of the two countries were abolished in May. In the same month, Bulgarian President Georgi Traikov visited Moscow, and in June, Mikhail Suslov, a member of the Soviet Presidium, visited Sofia.

Bulgaria made some efforts to improve relations with the West, although these moves were mostly restricted to cultural affairs and foreign trade. In February, Deputy Premier Stanko Todorov, during a visit to France, praised President Charles de Gaulle's call for negotiations to end the war in Vietnam and said that Bulgaria and France "have no serious divergencies" on international problems.

Relations between Bulgaria and the United States deteriorated further. On February 15, several hundred Asian and African students demonstrated in Sofia against United States air strikes in Vietnam. Rocks were thrown at the United States legation. The United States charged that the police deliberately delayed in putting down the riot. On March 6, daylong anti-American rallies were held with apparent government support. On May 3, Purvan Chernev, head of the Foreign Ministry's Americas department, said that the safety of United States diplomats could not be guaranteed because of deep public resentment against American policies. On May 17, Foy D. Kohler, the U.S. ambassador to the Soviet Union, walked out of a reception in Moscow honoring Bulgarian President Georgi Traikov after the latter attacked United States policies in Vietnam and the Dominican Republic.

Trade. Bulgaria increased exports of manufactured goods in 1965—a remarkable change for a country that in the past exported only agricultural products. Bulgarian machinery was exported primarily to the Soviet Union and other East European

BULGARIA · Information Highlights



Area: 42,729 square miles.
Population: 8,144,000 (July 1, 1964 est.).
Chief Cities (1963 est.): Sofia, the capital, 724,600; Plovdiv, 198,200; Varna, 161,800; Ruse, 117,500.
Government: *President of the Presidium* (since April 23, 1964)—Georgi Traikov; *Premier* (since Nov. 19, 1962) *and Communist Party First Secretary*—Todor Zhivkov. *Parliament*—National Assembly, 321 members, all belonging to the Fatherland Front.
Religious Faiths: Eastern Orthodox Church, 80% of population; Muslims, 10%; Roman Catholics, 1%.
Education: *Literacy rate* (1956)—85% of population aged 15 and over. *Total school enrollment* (1962)—1,500,260 (primary, 1,123,029; secondary, 157,695; technical, 134,671; higher, 84,720).
Finance (1965 est.): *Revenues*, $1,404,000,000; *expenditures*, 1,404,000,000; *monetary unit*, lev (1.17 leva equal U.S.$1).
National Income (1964): $5,128,000,000; average annual income per person, $630.
Economic Indexes: *Industrial production* (1964), 114 (1958=100); *cost of living* (1962), 103 (1958=100).
Manufacturing (metric tons, 1964): Cement, 2,585,000; wheat flour (1963), 1,374,000; crude steel, 474,000; processed meat (1963), 242,000; sugar (1963), 180,000; cotton yarn, 57,700; wool yarn, 16,800.
Crops (metric tons, 1963–64 crop year): Tobacco (1964–65), 149,600 (ranks 7th among world producers); wheat (1964–65), 1,900,000; maize, 1,732,000; sugar beets, 1,122,000; barley, 618,000; oats, 133,000; rye, 56,000.
Minerals (metric tons, 1963); Anthracite coal, 216,000 (ranks 18th among world producers); lead, 89,000 (world rank, 9th); zinc, 58,000 (world rank, 17th); manganese (1964), 52,000 (world rank, 19th); iron ore (1964), 716,000; gypsum (1964), 110,000; crude petroleum, 1,266,000 barrels.
Foreign Trade (1964): *Exports*, $969,000,000 (chief exports, 1963: foodstuffs, $244,000,000; organic raw materials, $187,000,000; machinery and equipment, $180,000,000; consumer goods, $125,000,000); *imports*, $1,057,000,000 (chief imports, 1963: machinery and equipment, $43,000,000; fuels, minerals, metals, $223,000,000; organic raw materials, $115,000,000). *Chief trading partners* (1962): Union of Soviet Socialist Republics (took 50% of exports, supplied 56% of imports); German Democratic Republic (East Germany) (took 10% of exports, supplied 9% of imports); Czechoslovakia (took 8% of exports, supplied 8% of imports).
Transportation: *Roads* (1959), 16,650; *motor vehicles* (1959), 30,300 (automobiles, 8,500); *railways* (1963), 2,585 miles; *merchant vessels* (1964), 38, (207,000 gross registered tons); *national airline*, Tabso; *principal airports*—Sofia, Plovdiv, Varna.
Communications: *Telephones* (1964): 225,400; *television stations* (1964), 1; *television sets* (1964), 66,000; *radios* (1963), 1,833,000; *newspapers* (1962), 12 (circulation, 1,170,000).

states, but new markets were opened in underdeveloped countries. In 1965, Bulgaria delivered and installed two complete industrial enterprises in Indonesia. On Dec. 28, 1964, Bulgaria and the Soviet Union signed an agreement to increase trade between them by 20% over 1964; trade with the USSR accounted for 55% of Bulgaria's foreign commerce in 1965.

Economy. In 1964, industrial production increased by 11.1% over 1963, an overfulfillment of the economic plan by 3.2%. Agricultural production rose 8.6%; grain production was up 15%, but the production of fruits and vegetables declined, and the number of cattle, sheep, and poultry fell. Capital investments rose 6.7%, national income 6%, and the average industrial wage, 2.3%. The economic plan for exports was surpassed by 8.4%, and that for imports by 9.1%.

Bulgaria's economic planners hoped to raise industrial production by 9.8% in 1965. The 1965 plan also envisaged a 7.7% increase in national income, mostly as a result of increased labor productivity.

It now appears that Bulgaria will adopt the new economic policy of the Soviet Union, Czechoslovakia, and East Germany, by transferring the responsibilities of economic planning from central government organs to the enterprises themselves. State-owned enterprises will have greater control over their own funds; they will be able to regulate the pay received by workers, and will be able to contract directly with commercial organizations.

Enterprises will choose "production committees" resembling the Yugoslav workers' councils. These committees will make decisions that will be binding on the directors of the enterprises.

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BUREAU OF MINES. See MINING.

BURMA

ASIA
AUSTRALIA

The goal of political unity continued to elude Burma's rulers in 1965, although there was apparently no immediate threat to General Ne Win's military regime. His government failed to register any major economic progress, but it did continue its policy of neutrality in world politics.

Political Dissent. Outwardly the Ne Win government appeared to be one of the most stable states in otherwise sorely troubled Southeast Asia. However, the government's efforts to expand its control over Buddhist monks led to acts of violent protest. Buddhist monks attacked the headquarters of the Burma Socialist Program party, the only political organization permitted in the country. Nearly 92 monks were arrested on charges of using religion for political purposes.

WIDE WORLD

PRESIDENT OF BURMA, Gen. Ne Win (right), receives a silver cigarette case from East Pakistan's Governor Monem Khan (left) during his visit to East Pakistan in February.

The roundup of the monks was followed by the arrest of about 80 former politicians. Most of them were members of banned political parties, including the party of ex-Premier U Nu, who was ousted by Gen. Ne Win in March 1962 and who is still held in detention. Some police and economic officials also were arrested, as well as Ne Win's onetime chief deputy, Brigadier Aung Gyi. These detentions suggested the persistence of hard-core opposition, but no immediate threat to the regime.

Efforts by the government to eradicate the many various insurgent groups in the country continued,

BURMA · Information Highlights

Area: 261,789 square miles.
Population: 24,229,000 (July 1, 1964 est.).
Chief Cities (1963 est.): Rangoon, the capital, 687,708; Mandalay, 212,873; Moulmein, 115,931.
Government: *Chairman of the Revolutionary Council*—General Ne Win (assumed power after a coup d'état on March 2, 1962); *Revolutionary Council* (15 members).
Religious Faiths: Buddhists, 85% of population; Roman Catholics, 1%; others, 14%.
Education: *Literacy rate* (1954), 58% of population aged 16 and over. *Total school enrollment* (1961)—1,926,612 (primary, 1,602,416; secondary, 306,988; teacher-training, 675; technical, 2,933; university, 13,600).
Finance (1965 est.): *Revenues,* $417,000,000; *expenditures,* $330,000,000; *monetary unit,* kyat (4.7619 kyats equal U.S.$1).
Gross National Product (1964): $1,620,000,000.
National Income (1964): $1,363,000,000; average annual income per person, $56.
Economic Indexes: *Agricultural production* (1964), 120 (1956–57=100); *cost of living* (1963), 99 (1958=100).
Manufacturing (metric tons, 1964): Petroleum products (1963), 598,000; cement, 131,000; sugar, 67,000; cotton yarn, 5,000.
Crops (metric tons, 1963): Rice, 7,457,000 (ranks 7th among world producers); peanuts, 321,000 (world rank, 9th); natural rubber, 9,000 (world rank, 12th); chick-peas (1964–65), 77,000; sesame (1964–65), 71,100; tobacco, 43,700; cotton seed, 35,000; dry peas (1964–65), 13,000.
Minerals (metric tons, 1964): Lead, 18,950 (ranks 20th among world producers); tin, 660 (world rank, 18th); nickel, 64 (world rank, 15th); silver, 1,355,000 troy ounces (world rank, 20th); salt, 127,000; zinc, 8,100; crude petroleum, 4,277,000 barrels.
Foreign Trade (1964): *Exports,* $239,000,000 (chief export, rice, $148,000,000); *imports,* $272,000,000 (chief imports, 1962: textile yarn and fabrics, $53,200,000; nonelectrical machinery, $23,600,000; iron and steel, $14,100,000). *Chief trading partners* (1962): Japan (took 5% of exports, supplied 23% of imports); Great Britain (took 10% of exports, supplied 15% of imports); Communist China (took 7% of exports, supplied 13% of imports).
Transportation: *Roads* (1964), 15,535 miles (4,205 paved); *motor vehicles* (1964), 65,000 (automobiles, 30,000); *railways* (1963), 1,906 miles; *merchant vessels* (1964), 9 (48,000 gross registered tons); *national airline,* Union of Burma Airways; *principal airport,* Rangoon.
Communications: *Telephones* (1964): 20,828; *radios* (1963), 203,000; *newspapers* (1962), 31 (daily circulation, 202,000).

but without spectacular success. As many as 10,000 rebels of assorted ideological and ethnic complexion were waging guerrilla warfare. The most serious threat to the government seemed to be the "Shan National Army," a group who reflected the resentment of the important regional minority in Shan State against alleged high-handed treatment by the Burmese majority. The once formidable "White Flag" Communists probably numbered no more than 1,000 men in 1965.

"Burmese Way to Socialism." Full nationalization of the economy remained the aim of the military government as it continued to pursue its "Burmese Way to Socialism" program. The government expropriated a number of foreign firms, including Burma Corp. Ltd., the nation's largest mining combine, and Unilever Ltd., a British soap-making firm. Public works battalions were formed to take over government construction contracts held by private firms. The government's agrarian revolution was boosted by the abolition of approximately $3 million worth of land rents previously paid by farmers for cultivating rice lands. The government also began to assume control of private schools throughout the country.

Economy. Economic performance under the Ne Win government continued to be disappointing. Figures for 1964 (released in mid-1965) showed that the gross national product declined by more than 6%, returning to its 1961–62 level. Agricultural output dropped by 5%, industrial production by 11%, and trade by 13%. Unemployment and consumer goods shortages, occasioned by wholesale nationalization measures in March–April 1964, were somewhat alleviated after the private sector was allowed to share the distribution of consumer goods with state shops.

Foreign Policy. Burma continued its policy of nonalignment in foreign affairs, dealing both with Communist and non-Communist countries. For example, the government in 1965 agreed to buy $5 million worth of textile mills from Communist China. On the other hand, a quarter of its foreign loans contracted for the 1965–66 fiscal year were from Japan. Gen. Ne Win visited the Soviet Union, India, and Pakistan in 1965. He continued to pursue policies supporting general and nuclear disarmament, a "Geneva-type" settlement of the Vietnamese problem, and a reconciliation between Indonesia and Malaysia.

Relations between Washington and Rangoon remained cool. However, Burma and the United States signed an agreement providing for U.S. financing to construct a modern teak mill.

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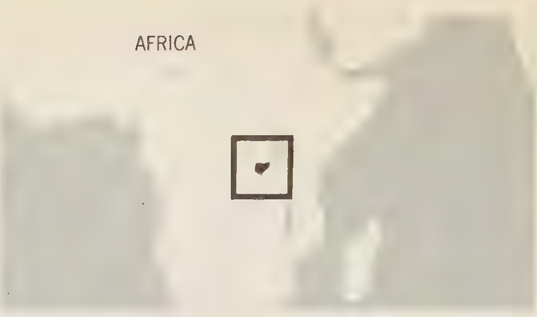
BURUNDI

As 1965 opened the political situation in Burundi was appraised by most foreign observers in terms of the struggle for influence between Communist China and Western elements. The year was also marked by rivalry between the Watusi (or Tusi) aristocracy and the Bahutu (or Hutu) peasantry.



BURUNDI · Information Highlights

Area: 10,747 square miles.
Population: 2,780,000 (mid-1964 est.).
Chief Cities (1960 est.): Bujumbura, the capital, 47,036.
Government: *King*—Mwambutsa IV (b. 1909; acceded, 1915); *Prime Minister*—Léopold Biha (took office Sept. 30, 1965); *Parliament*—Senate, 16 members; National Assembly, 33 members; party seating (1965): Union of National Progress, 21; People's party, 10; Independents, 2.
Religious Faiths: Roman Catholics, 56% of population; others, 44%.
Education: *Total school enrollment* (1962)—114,115 (primary, 110,045; secondary, 1,242; teacher-training, 1,393; technical, 1,384; higher, 51).
Finance (1963): *Revenues*, $3,000,000; *expenditures*, $4,000,000; *monetary unit* (1965), Burundi franc (87.50 francs equal U.S.$1).
Crops (metric tons, 1964–65 crop year): Green coffee, 12,000.
Minerals: Tin ore (1964), 16 metric tons; columbium and tantalum concentrate (1962), 2,000 kg.
Transportation: *Principal airport*, Bujumbura.
Communications: *Telephones* (1964): 2,300.

Assassination. The cabinet led by Albin Niamoya, under whose premiership Burundi had established closer relations with Communist nations, was replaced on Jan. 7, 1965. The new cabinet was headed by former Premier Pierre Ngendandumwe, a Bahutu moderate, who was committed to neutralism in international relations and to intercommunal harmony in domestic affairs. On January 15, however, Premier Ngendandumwe was assassinated. Although Western rumors of Communist Chinese complicity in the murder were denied in Bujumbura, the capital, the government suspended diplomatic relations with Peking. Joseph Bamina succeeded to the premiership.

Elections. After King Mwambutsa IV dissolved the 33-member National Assembly in March, assembly elections were held on May 10. All of the leading Watusi figures in the UPRONA party associated with the Niamoya regime, except Niamoya himself, were defeated.

Internal Dissension. Following the elections, communal tensions, already inflamed by the murder of Premier Ngendandumwe, prevented the new government from functioning. On July 27, King Mwambutsa IV returned to Burundi after a four-month absence and took personal charge of the government.

In mid-September the king appointed Léopold Bihumugani (alias Biha), a staunch traditionalist, to head a new cabinet. Biha's policies were viewed with distrust by Bahutu leaders, and on October 19 an attempted uprising by radical Bahutu elements of the army nearly cost Biha his life. After the insurrection had been crushed, reprisals were carried out against Bahutu intellectuals and their political organization, the People's Party.

Economy. Political unrest had an adverse effect on Burundi's economy. In February the Burundi franc was devalued to 87.50 francs to the U.S. dollar. Economic and social problems caused by the presence of nearly 80,000 refugees in Burundi (mostly Watusi from Rwanda) were relieved somewhat by $1.3 million donated by the United Nations.

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BUS TRANSPORTATION. See MOTOR TRANSPORTATION; URBAN TRANSIT.

BUSINESS. See ECONOMIC REVIEW.

CABINET, U.S. For a list of cabinet officials, see UNITED STATES.

CALIFORNIA

Legislative reapportionment, another record budget, demonstrations at the state university, and a controversy over agricultural labor highlighted the events of 1965 in California.

Reapportionment. Under a court order to reapportion both its Senate and Assembly, the California Legislature, in the second special session of the year, finally, and reluctantly, came up with a reapportionment plan in October. The plan eliminated 14 northern senators and transferred control of the legislature to the southern part of the state. After legislative elections are held in 1966, eight southern counties will hold 46 of the 80 assembly seats and 22 of the 40 senate seats. Los Angeles County, which now has one senator, will have 14½ (sharing one with neighboring Orange County.)

Budget. The Legislature approved a record $4.17 billion budget for fiscal year 1966, up more than $500 million from fiscal year 1965. It failed, however, to adopt proposed tax reforms. In its first special session, which began on June 25, the Legislature adopted a $107 million tax measure to make up the deficit between state revenues and budgeted expenditures. The bill provided for an extension of the sales tax and a speed-up in collection of sales taxes from large business concerns.

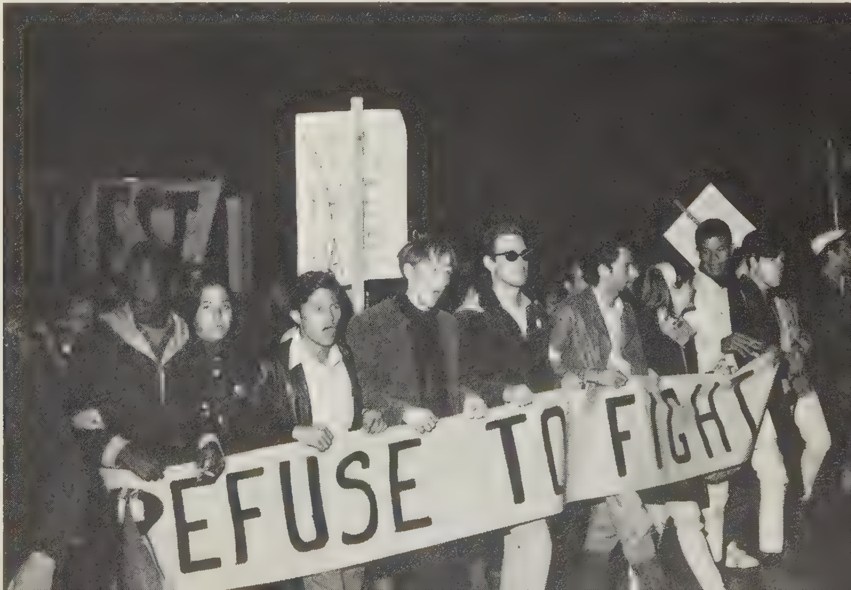
Student Demonstrations. Demonstrations by students of the Free Speech Movement at the Berkeley campus of the University of California in late 1964 succeeded in getting university authorities to relax restrictions on political activity on campus. (In July 1965, however, over 600 persons were convicted of trespassing and resisting arrest during the December 1964 "sit-in" at Berkeley.) The FSM was replaced in 1965 by what was termed a "filthy speech movement," and nine persons were arrested on obscenity charges. About mid-year the demonstrations became political protests against United States policies regarding the Dominican Republic and Vietnam.

After Edward W. Strong, chancellor of the University of California, resigned as a result of the FSM demonstrations, a special committee was ap-

CALIFORNIA : Information Highlights

Area: 158,693 square miles.
Population: 18,388,000 (1965 est.).
Chief Cities (1965 est.): Sacramento, the capital (265,000); Los Angeles (2,738,000); San Francisco (745,000); San Diego (636,000); Oakland (378,000); Long Beach (368,000); San Jose (308,000); Fresno (156,000).
Government: *Chief Officers*—governor, Edmund G. Brown (D); lt. gov., Glenn M. Anderson (D); secy. of state, Frank M. Jordan (R); atty. gen., Thomas C. Lynch (D); treas., Bert A. Betts; supt. of pub. instr., Max Rafferty; chief justice, Roger J. Traynor. *Legislature*—California Legislature (convened Jan. 4, 1965); Senate, 40 members (24 Democrats, 14 Republicans, 2 vacancies); Assembly, 80 members (49 Democrats, 31 Republicans).
Education: *School enrollment* (1964–65)—public elementary, 2,950,000 pupils (89,000 teachers); public secondary, 1,575,000 pupils (59,000 teachers); nonpublic schools, 448,900 pupils (13,730 teachers); college and university (fall 1964), 789,330 students. *Public school expenditures* (1964–65)—$2,250,000,000 ($570 per pupil); average teacher's salary, $7,900.
Public Finance (fiscal year 1965): *Revenues,* $3,260,987,810 (sales tax, $939,649,277; motor fuel tax, $508,930,524; federal funds, $2,646,290). *Expenditures,* $3,329,944,487 (education, $1,367,488,103; health, welfare, and safety, $606,438,254; highways, $733,635,487). *State debt,* $3,422,849,000 (June 30, 1965).
Personal Income (1964): $56,122,000,000; average annual income per person, $3,103.
Public Assistance (fiscal year 1965): $891,422,718 to 944,535 recipients (aged, $360,704,281; dependent children, $298,458,457).
Labor Force (employed persons, July 15, 1965): *Agricultural,* 337,000; *nonagricultural* (wage and salary earners), 5,787,200 (24.6% manufacturing, 22.2% trade, 18.8% government). *Unemployed persons* (July 15, 1965)—441,000.
Manufacturing (1963): Value added by manufacture, $17,157,242,000 (transportation equipment, $2,742,346,000; primary metals, $592,451,000; nonelectrical machinery, $1,078,390,000; electrical machinery, $2,162,756,000; fabricated metals, $1,059,871,000; food and products, $2,452,211,000; printing and publishing, $819,511,000.
Agriculture (1964): *Cash farm income,* $3,654,015,000 (livestock, $1,320,690,000; crops, $2,299,271,000; govt. payments, $34,054,000). *Chief crops* (tons)—hay, 7,696,000 (ranks 3rd among the states); sugar beets, 7,157,000 (rank, 1st); alfalfa, 6,376,000 (rank, 2nd); grapes, 3,165,000 (rank, 1st); barley, 1,726,000 (rank, 2nd); citrus fruits, 1,668,000 (rank, 2nd); potatoes, 1,365,000 (rank, 3rd); peaches, 1,190,000 (rank, 1st); rice, 801,000 (rank, 4th); cottonseed, 725,000 (rank, 3rd).
Mining (1964): *Production value,* $1,560,510,000 (ranks 3rd among the states). *Chief minerals* (tons)—gypsum, 1,893,000 (rank, 1st); salt, 1,525,000 (rank, 6th); lime, 577,000 (rank, 9th); gold, 71,028 troy ounces (rank, 6th); silver, 172,000 troy ounces (rank, 9th); petroleum, 300,009,000 barrels (rank, 3rd); natural gas, 664,051,000,000 cubic feet (rank, 6th).
Fisheries (1964): *Commercial catch,* 502,464,000 pounds ($49,926,000). *Leading species*—yellowfin tuna, 149,020,000 pounds ($19,850,000); jack mackerel, 89,693,000 pounds ($2,109,000); skipjack, 66,059,000 pounds ($6,624,000); albacore, 42,551,000 pounds ($6,580,000).
Transportation: *Roads* (1965), 156,007 miles (83,858 paved); *motor vehicles* (1965), 10,707,843; *railroads* (1964), 15,071 miles; *airports* (1965), 707.
Communications (1965): *Telephones,* 9,983,100; *television stations* (1964), 36; *radio stations* (1964), 336; *newspapers,* 132 (daily circulation in 1964, 5,503,213).

PIX



CALIFORNIA STUDENTS at Berkeley protested U.S. involvement in Vietnam war in October. Students marched toward Oakland Army Terminal, but were stopped at city limits by police.

UPI

SOUTHERN CALIFORNIA had torrential rains in late November, causing destruction to crops and to property in hilly residential areas. Here, an emergency crew assesses the damage on a Glendale street which collapsed, creating a temporary waterfall.

pointed by the university's Board of Regents to study the situation. The committee report, presented in May, recommended a sweeping reorganization of the university to give each of its nine divisions substantial independence under broad supervision by the board. In March, President Clark Kerr and Acting Chancellor Martin Meyerson resigned, but reconsidered their decision on request of the board. In July, Meyerson was replaced as chancellor by Roger W. Heyns. (See also EDUCATION.)

Agricultural Workers. The year 1965 was the first since 1951 in which Mexican braceros were not allowed to work on California farms. Many growers experienced difficulty in getting laborers to harvest crops, especially strawberries and asparagus. Because of the lack of American laborers, 300 Japanese date pickers and pollinators were authorized to work in February. In June, 3,500 more foreign workers were authorized, and high school students were hired to harvest some crops. Additional friction occurred when unions tried to organize grape pickers in central California.

Legislation. In addition to its actions on reapportionment and the budget, the California Legislature adopted a state Medicare plan that will expand the coverage of the federal program, and enacted a smog-control measure. The smog-control bill requires exhaust control devices on all cars, buses, and trucks sold in California, with dates for compliance varying from 1966 through 1968, depending on the type of vehicle. The legislature also imposed an addditional 1-cent-per-gallon gasoline tax to raise money for rebuilding roads and bridges destroyed in northern California by floods in late December 1964.

Court Decisions. In May the U.S. Supreme Court denied California's claim to oil-rich land between the coast and offshore islands. The court upheld the federal government's claim to all submerged land beyond a three-mile belt along the coast and around each offshore island.

California's ban on subscription television was declared unconstitutional by a superior court judge in May. The ban was the result of an initiative measure passed by the state's voters in 1964.

The California Supreme Court heard arguments on the constitutionality of another initiative measure adopted in 1964. This measure invalidated antidiscrimination legislation in housing.

Law Enforcement. Plans were made to double the size of the highway patrol over the next three years. Recent incidents of attacks on officers led to a new policy that will equip most patrol cars with 12-gauge shotguns. Attorney General Thomas C. Lynch branded several motorcycle clubs as outlaw groups, and called for legislative action to curtail them. He also warned against the growing menace of certain extreme right-wing paramilitary groups in the state.

Property Assessment Scandals. Investigations disclosed irregularities in property assessment processes in several counties. Special favors were allegedly given by assessors to certain property owners. One assessor committed suicide.

(See also LOS ANGELES.)

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CAMBODIA

The long-deteriorating relations between Cambodia and the United States reached a low point in the spring of 1965, and Cambodia announced a complete break in diplomatic relations on May 3. Cambodia's chief of state, Prince Norodom Sihanouk, although apparently still trying to use the American presence in Southeast Asia as a counterweight against the threat of Communist absorption, denounced the United States frequently and vigorously during the year. Yet, while drawing closer to Communist China, Sihanouk asserted that he was interested in resolving differences with the United States. His fluctuations expressed the vulnerability of Cambodia, which is situated in a part of the world where China's ambitions and America's commitments conflict.

Cambodia and the United States. Prince Sihanouk's immediate reasons for severing ties with the United States were an article in an American magazine that allegedly was disrespectful to Cambodia's queen mother, and the death of a Cambodian boy accidentally killed on April 28 in a bombing attack by American and South Vietnamese planes that had crossed the Cambodian border in pursuit of Communist Vietcong insurgents. Cambodia offered to maintain relations between Washington and Phnom Penh on the consular level, but the United States declined.

PRINCE NORODOM SIHANOUK, Cambodia's chief of state, continued in 1965 to follow a dangerous policy of playing off Communist China against the United States in an effort to preserve Cambodia's independence and keep it an "oasis of peace" in troubled Southeast Asia. By breaking relations with the United States on May 3, he struck a strong blow for China, but many observers judged that his motivation was fear of China rather than support for its policies. They reasoned that Sihanouk expected a Communist victory in neighboring South Vietnam and meant to be on the winning side when it occurred.

Sihanouk was born on Oct. 31, 1922, in Cambodia, then a monarchy under French control. Elected king in 1941, he submitted to Japanese puppet rule during World War II. In 1955, when Cambodia won its independence, Sihanouk gave his throne to his father and became premier. After his father's death, he again renounced the throne—in favor of his mother—and took the title of chief of state on June 20, 1960.

WIDE WORLD

CAMBODIA'S PRINCE SIHANOUK (right) welcomes Indonesia's President Sukarno, who arrived in Phnom Penh to attend the Indochinese People's Conference, March 1–9.

Sihanouk's attitude toward the United States continued to be ambivalent. While repeatedly demanding that the United States abandon its struggle against the Communists in South Vietnam, he also declared that its withdrawal would leave Cambodia "face to face with Vietnamese communism, the most terrible kind." The prince urged the Communists to give the West "solid guarantees" that any Vietnamese settlement would endure. He reportedly favored a continued American presence in the Philippines and Thailand to balance Communist strength in the area.

International Diplomacy. The difficulty of Sihanouk's position was illustrated by the Indochinese People's Conference, to which his government was host in Phnom Penh from March 1 to 9. Thirty-eight political movements in Cambodia, Laos, and Vietnam were represented, including such Communist bodies as North Vietnam's Fatherland Front, South Vietnam's National Liberation Front, and the Laotian Neo Lao Hat Xat, the political arm of the insurgent Pathet Lao. The conference called for American withdrawal from Vietnam and new international talks on Cambodia and Laos. Sihanouk probably had intended to use the meeting to make Vietnamese peace proposals that might have been acceptable to non-Communists, but the conference ended as an almost wholly pro-Communist affair.

Sihanouk's proposal for an international conference to guarantee Cambodian neutrality represented another failure of his foreign policy. The Soviet Union, cochairman with Britain of the 1954 and 1961–62 Geneva Conferences on Indochina and Laos, respectively, at first endorsed the conference, but subsequently reneged after the United States, Britain, and other Western nations reluctantly accepted it.

Relations with Its Neighbors. Border incidents with South Vietnam and Thailand further disturbed already strained relations between Cambodia and its most important immediate neighbors. Prince Sihanouk vigorously denied that he was aiding the Vietcong, but, with or without his assistance, the Vietcong sought sanctuary across the Cambodian frontier when pursued by South Vietnamese government forces. The situation caused many troublesome incidents, including that of April 28 which precipitated the U.S.-Cambodian break. The most serious border clash with Thailand occurred on June 20 when 14 Cambodian soldiers and a Thai police officer were killed.

CAMBODIA · Information Highlights

ASIA
AUSTRALIA

Area: 69,898 square miles.
Population: 6,200,000 (mid-1964 est.).
Chief Cities (1962 prelim. census): Phnom Penh, the capital, 403,500; Battambang, 25,000; Kompong Chnang, 20,000; Kompong Cham, 15,000.
Government: *Queen*—Sisowath Kossamak (acceded 1960); *chief of state*—Prince Norodom Sihanouk (took office June 20, 1960); *premier*—Prince Norodom Kantol. *Parliament*—National Assembly, 62 members (all belonging to the Popular Socialist Community); Council of The Kingdom, 24 members.
Religious Faiths: Buddhists, 90% of population; Roman Catholics, 0.9%, others, 9.1%.
Education: *Total school enrollment* (1962)—655,465 (primary, 596,360; secondary, 54,155; teacher-training, 1,383; technical, 1,986; higher, 1,581).
Finance (1963 budget): *Revenues*, $110,000,000; *expenditures*, $160,000,000; *monetary unit*, rial (35 rials equal U.S.$1).
Gross National Product (1963 est.): $675,000,000.
Cost of Living Index (1964): 133 (1958=100).
Crops (metric tons, 1964): Rice, 2,574,000 (ranks 14th among world producers); rubber, 45,800 (rank, 7th); maize, 220,000; bananas, 160,000; dry beans, 12,000; soybeans, 11,000; jute, 5,000.
Minerals: Salt (1962), 40,000 metric tons; gold (1964), 6,000 troy ounces.
Foreign Trade (1964): *Exports*, $88,000,000 (chief exports, 1963: rice and rice products, $46,800,000; rubber, $23,000,000; maize, $6,900,000; kapok, $1,600,000); *imports*, $82,000,000 (chief imports, 1963: iron and steel manufactures, $10,200,000; nonelectrical machinery, $8,400,000; cotton goods, $8,100,000). *Chief trading partners* (1963): France (took 26% of exports, supplied 18% of imports); Hong Kong (took 10% of exports, supplied 20% of imports); Singapore (took 10% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 3,181 miles (1,354 paved); *motor vehicles* (1964), 20,000 (automobiles, 12,500); *railways* (1963), 240 miles; *national airline*, Royal Air Cambodge; *principal airport*, Phnom Penh.
Communications: *Telephones* (1964): 3,875; *television sets* (1963), 1,000; *radios* (1959), 9,900; *newspapers* (1962), 11 (daily circulation, 48,000).

UPI

MILITARY AID from China exemplifies close Cambodian-Chinese ties. Prince Sihanouk (r.), with Chinese ambassador and his wife, inspects display of small arms weapons.

Internal Politics. Despite the worsening war in adjacent South Vietnam and the protracted Communist-instigated civil strife in Laos immediately to the north, the Sihanouk government retained its remarkable stability in Cambodia. The indigenous Communist movement was very weak, but Prince Sihanouk nonetheless felt moved to rebuke the Communists for their obstructionist tactics in the legislature and for their antigovernment propaganda. Opposition to Sihanouk was most evident in the activities of the rebel Khmer Serei movement, which beamed anti-Sihanouk broadcasts from Thailand and South Vietnam.

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CAMEROON

ASIA
S. AMERICA

Cameroon's presidential elections, held on March 27, 1965, resulted in the reelection of President Ahmadou Ahidjo and Vice President John N. Foncha. The Ahidjo-Foncha ticket ran unopposed and garnered 99.95% of the total votes cast.

In June, legislative elections in the Western and Eastern regions confirmed the hold of the dominant parties on both parts of the federation. In West Cameroon, the Kamerun National Democratic party (KNDP) ran unopposed, as did the Union Camerounaise (UC) in the East. The KNDP and the UC together make up a single—and the only—political group in the Cameroon National Federal Assembly.

Government Changes. Because the constitution prohibits holding state and federal offices simultaneously, Vice President Foncha, who since 1961 had been both prime premier of West Cameroon and vice president of the federal republic, resigned the former position after his reelection as vice president. On May 12, President Ahidjo announced the appointment of Augustin Ngom Jua, cofounder of the KNDP, as premier of West Cameroon—a move that caused some stress in party circles. A week later ten prominent members of the KNDP, including S.T. Muna, Jua's main opponent and a federal minister, were suspended from the party for disciplinary reasons. In August, Vincent de Paul Ahanda, former Cameroon ambassador to Belgium, was made premier of Eastern Cameroon, replacing Charles Assalé.

Release of Prominent Opposition Leaders. On July 10 the leaders of four opposition parties were released from prison after serving sentences since July 1962 for sedition and conspiracy. The four were André-Marie Mbida, former premier of Cameroon; Charles Okala, former foreign minister; Theodore Mayi Matip, leader of the Union des Populations du Cameroun; and Bebey Eyidi, national secretary of the Parti Travailliste.

Economic Successes. Extraordinary economic advances have been made by Cameroon since 1960. In 1965 the National Assembly adopted the first ordinary budget to be balanced without outside aid.

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CAMEROON · Information Highlights

Area: 183,568 square miles.

Population: 5,150,000 (Dec. 31, 1964 est.).

Chief Cities (1962): Yaoundé, the capital, 93,269 (census); Douala, 135,000 (est.); Buea, 31,000 (est.).

Government: *President*—Ahmadou Ahidjo (took office 1960); *Vice President*—John Foncha (took office 1961) *Parliament*—National Federal Assembly, 50 members: Union Camerounaise, 40; Kamerun National Democratic Party, 10.

Religious Faiths: Animist, 48% of the population; Roman Catholic, 23%; Muslim, 14%.

Education: *Total school enrollment* (1963)—516,227 (primary, 489,808; secondary, 19,310; teacher-training, 843; technical, 5,740; university, 526).

Finance (1963–64): *Federal revenues and expenditures,* $70,400,000 each; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).

Economic Index (1964): *Cost of Living,* Europeans (1962=100), 117; Africans (1961=100), 121.

Manufacturing: Aluminum (1964), 50,600 metric tons; lumber metric tons; lumber (1961), 80,000 cubic meters.

Crops (metric tons, 1964–65 crop year): Cocoa beans, 90,000 (ranks 5th among world producers); coffee, 57,000 (world rank, 13th); peanuts (1963–64), 125,000 (world rank, 15th); cottonseed, 34,000; palm kernels (1962–63), 32,800; natural rubber (1963), 4,200.

Minerals Gold (1964), 1,000 troy oz.; tin (1964), 30 metric

Foreign Trade (1964): *Exports,* $122,000,000 (chief exports: coffee, $33,600,000; cocoa, $25,500,000; aluminum, $20,700,000); *imports,* $116,000,000 (chief imports, 1963: motor vehicles, $10,800,000; alumina, $9,200,000; cotton fabrics, $5,000,000). *Chief trading partners* (1963): France (took 57% of exports, supplied 57% of imports); Netherlands (took 16% of exports, supplied 2% of imports); U.S. (took 5% of exports, supplied 5% of imports).

Transportation: *Roads* (1964), 8,531 miles (345 paved); *motor vehicles* (1964), 30,889 (automobiles, 13,059); *railways* (1963), 313 miles.

Communications: *Telephones* (1964), 4,087; *radios* (1959), 9,900; *newspapers* (1962), 2 (daily circulation, 10,000).

(Opposite page) NEW CANADIAN FLAG flies for the first time before Parliament Buildings in Ottawa on Feb. 15, 1965.

CANADA

UPI

JOHN G. DIEFENBAKER, leader of Canada's Progressive Conservative party, carried his 1965 bid for election to provincial voters in a series of spirited campaign speeches.

CANADA

Canadian affairs in 1965 were again marked by the contradictions that had prevailed throughout the previous year. Economically, Canadians were complacent as they enjoyed a fifth year of prosperity. The predicted drop in the country's long economic upswing did not occur, although there were apparent inflationary signs in the sharp rise of investments and in the construction boom. Politically, there was neither consensus nor sharp division. The mood toward the government and political parties in general was one of frustration, and this was reflected in the results of the federal elections on Nov. 8, 1965.

Despite these disparate attitudes, Canadians showed a new awareness of their responsibilities, particularly to the less affluent within their ranks. Contributory old-age pensions, Medicare, a labor code, development financing, and a domestic peace corps all had their beginnings during 1965.

POLITICAL AFFAIRS

Two successive general elections, in 1962 and 1963, produced Parliaments in which neither major party—the Liberal or the Progressive Conservative—held a majority. As a result, persistent obstruction and bitter controversy slowed the work of legislation. Then, the Rivard scandal involving government personnel erupted near the end of 1964, rousing public opinion against wrongdoing within government circles and spreading suspicion of corruption. After the third session of the 26th Parliament was ended by dissolution in September, the ensuing election returned a government that still did not have a majority.

Parliament. The second session of the 26th Parliament, beginning early in 1964 and lasting until April 3, 1965, sat for 248 days, engaging in debates that filled 13,000 pages of *Hansard*. This deluge of words was caused in part by the government's minority position, which gave the opposition an opportunity for using obstructive tactics; in part by the long argument over the new flag (settled in December 1964); and in part by bickering over the Rivard affair. The net effect was a lowering of Parliament's prestige.

The third legislative session, which opened on April 5, was also marked by acrimony. However,

CANADA · Information Highlights

Area: 3,851,809 square miles.
Population: 19,705,000 (Oct. 1, 1965, est.).
Chief Cities (1961 census): Ottawa, the capital (268,206); Montreal (1,191,062); Toronto (672,407); Vancouver (384,522).
Government: *Governor General*—George P. Vanier; *prime minister,* Lester B. Pearson. *Parliament*—Senate, 102 members (appointed for life); House of Commons, 265 (with party seating as of Jan. 1, 1966: Liberal, 131; Progressive Conservative, 98; New Democratic, 21; Creditiste, 9; Social Credit, 5; Independent Liberal, 1).
Religious Faiths: Roman Catholic, 45.7% of population; United Church of Canada, 20.1%; Anglican, 13.2%; Presbyterian, 4.5%; Lutheran, 3.6%; others, 12.9%.
Education: *Total school enrollment* (1963–64)—4,945,368 (elementary, 3,594,215; secondary, 1,192,883; college and university, 158,270), including about 38,000 Indian and Eskimo students who are maintained in a special school system provided for by the federal government.
Finance (1965 est.): *Revenues,* $62,084,000,000; *expenditures,* $60,135,000,000; *public debt* (1964), $240,000,000; *monetary unit,* Canadian dollar (in 1965, 1.08 Canadian dollars equaled U.S. $1).
Gross National Product (1964): $43,500,000,000.
National Income (1964): $32,500,000,000; average annual income per person, $1,693.
Economic Indexes (1964): *Industrial production* (1958=100), 138; *agricultural production* (1956–57=100), 126; *cost of living* (1958=100), 108.
Manufacturing (metric tons, 1964): Crude steel, 8,283,000; cement, 7,176,000; newsprint paper, 6,624,000; wheat flour, 2,088,000; meat, 1,018,000; aluminum, 764,426; gasoline (1963), 13,839,000.
Crops (metric tons, 1964): Wheat, 16,341,000 (ranks 3rd among world producers); oats, 5,508,000 (world rank, 2nd); barley, 3,632,000 (world rank, 7th); potatoes, 2,122,000 (world rank, 16th); corn, 1,345,000 (world rank, 16th); linseed, 516,000 (world rank, 3rd); rye, 310,000 (world rank, 13th); soybeans, 190,000 (world rank, 7th).
Minerals (metric tons, 1964): Iron ore, 35,076,000 (ranks 5th among world producers); gypsum, 5,782,000 (world rank, 2nd); salt, 3,532,000 (world rank, 8th); zinc, 662,186 (world rank, 1st); copper, 448,754 (world rank, 5th); nickel, 211,512 (world rank, 1st); uranium ore, 6,272 (world rank, 2nd); petroleum, 275,364,000 barrels (world rank, 9th); silver, 30,316,486 troy ounces (world rank, 4th); gold, 3,810,738 troy ounces (world rank, 3rd); bituminous coal, 8,459,000.
Foreign Trade (1964): *Exports,* $8,091,000,000 (chief exports: manufactured goods, $1,619,000,000; wheat, $1,041,000,000; newsprint, $772,000,000; wood, $661,000,000); *imports,* $7,554,000,000 (chief imports, 1963: bus and auto parts, $457,000,000; crude petroleum, $310,000,000; agricultural machinery, $300,000,000). *Chief trading partners* (1963): U.S. (took 56% of exports, supplied 68% of imports); Britain (took 15% of exports, supplied 8% of imports); Japan (took 4% of exports, supplied 2% of imports).
Transportation: *Roads* (1964), 505,191 miles (79,191 paved); *motor vehicles* (1964), 6,037,469 (automobiles, 4,788,896); *railways* (1963), 43,870 miles; *merchant vessels* (1964), 62 (266,000 gross registered tons); *airline,* Air Canada; *principal airports* (in order of size and number of passengers handled), Montreal, Toronto, and Vancouver.
Communications: *Telephones* (1965), 7,021,000; *television stations* (1964), 231; *television sets* (1964), 4,950,000; *radios* (1962), 9,200,000; *newspapers* (English and French, 1965), 112 (daily circulation, 4,294,924).

the government managed to introduce a fair amount of legislation, although many bills were not completed by the time of the summer recess. Parliament was dissolved in September, and an election was called for November 8.

Legislation. The budget presented by Walter Gordon, minister of finance, made few changes in taxation, except for a 10% reduction in personal income taxes. Two programs based on American models were introduced: a "war on poverty" to eliminate pockets of economic drought across the country, and a "Company of Young Canadians" to function as a domestic peace corps. A Canada Development Corporation, with an authorization of $1 billion from government and private funds, was formed to develop Canadian industry, thereby preventing a foreign takeover of Canadian business. Gordon also revised the Bank Act, but left the maximum interest rate on bank loans at 6%.

A major item of legislation that the dissolution of Parliament in September left unfinished was the redistribution of parliamentary constituencies in accordance with the results of the 1961 census. (Under provisions of the British North America Act, this rearrangement must be carried out after each decennial census.) Previously, reorganization had been effected by a House committee, leaving the incumbent government free to use its parliamentary majority to redraw constituencies to its own advantage. However, Parliament recently decided that the population of each constituency should number as close to 70,000 as possible, with a tolerance of 25% above or below that figure. The drawing of constituency boundaries, to be done by impartial provincial commissions, was completed in all 10 provinces by midyear, and awaited parliamentary approval.

Because urban areas have grown rapidly in the past decade, reapportionment under the 1961 census meant that cities would gain representation at the expense of rural areas. Parliamentary members of all parties, therefore, found themselves in the position of having to approve new district boundaries that might eliminate their own constituencies. Consequently, the slow process of approving the new system was not completed by the time Parliament was dissolved. As a result, the November elections took place in constituencies based on 1951 populations—a condition favoring the Conservatives, who are strong in rural areas, at the expense of the Liberals and New Democrats in the cities.

Elections. There was widespread feeling that the November 8 election was unnecessary, since the Liberal government was slowly getting its measures through Parliament. The smaller parties did not want to force another election, and John Diefenbaker's Conservative party was so torn by internal dissension that many of its adherents were reluctant to support him in challenging the government. Prime Minister Lester B. Pearson's decision to call a fall election seemed to be based primarily on assurances by his party managers that the Liberals would win a comfortable majority.

During the campaign, Liberal spokesmen failed to clarify the government's plans. Moreover, all parties sidestepped major pending issues—the country's predicted financial and economic difficulties, the conflict between English and French Canada over the balance of power within confederation, and the ambiguities in Canadian-American relations. Diefenbaker conducted a forceful campaign, but Pearson was not at his best in campaign oratory.

WIDE WORLD

PRIME MINISTER LESTER B. PEARSON casts his ballot in the November 8 federal election that returned him and his Liberal party to office. Mrs. Pearson looks on at right.

Election results showed that neither the Liberals nor the Conservatives enjoyed the confidence of a majority of the people. Little more than 74% of the qualified voters went to the polls, and they elected a new Parliament in which party distribution differed little from that of the previous House of Commons. The Liberals received 40% of the vote and won 131 seats, just two short of the 133 needed for a majority. The Conservatives won 32% of the vote and 98 seats; New Democrats, 18% and 21 seats; Quebec Creditistes, 5% and 9 seats; Social Crediters, 4% and 5 seats; Independent Liberals, 1 seat.

The Liberals did well in Ontario, as expected; not quite so well as expected in Quebec; but lost badly in Nova Scotia. In the western provinces, they gained one seat in Manitoba, none in Saskatchewan or Alberta, and seven in British Columbia. It could be concluded from the election, therefore, that the Liberal government was essentially a government of central Canada, with the Conservatives representing the peripheral and rural areas, but having little support in Quebec.

The New Democrats were the only group that had reason to be pleased with the election results. They increased their percentage of the popular vote (from 15% to 18%), and in many urban areas ran second to the Liberals. Their chief disappointment was in Quebec, where they increased their vote but failed to win a single seat. The election proved to the Liberals that if they expect to win more general support, they must emphasize social welfare—the issue stressed by the New Democrats—and must build up mass support in the Prairie provinces.

Cabinet Changes. In mid-December, Prime Minister Pearson reconstructed his cabinet. Two of his ministers, J.W. McNaught of mines and technical surveys and Harry Hays of agriculture, were defeated in the election. His closest associate, Walter Gordon, who had urged him to hold an election, resigned on the ground that he had given bad advice. Two ministers involved in questionable credit purchases resigned under pressure. There were demands from the English Canadian press for the resignation of Minister of Justice Guy Favreau, who was responsible for the handling of the Rivard case, and Quebec demanded increased recognition for the new school of Quebec liberals, whose spokesman in Commons was Maurice Sauvé.

UPI

PAUL MARTIN, Canada's secretary of state for external affairs, presents his country's plea for a negotiated peace in Vietnam to the UN General Assembly on Sept. 24, 1965.

THE CANADIAN MINISTRY

(In order of precedence in the Privy Council as of Jan. 1, 1966)

Prime Minister, **Lester Bowles Pearson**
Secretary of State for External Affairs, **Paul Martin**
Minister of Transport, **John W. Pickersgill**
Minister of National Defense, **Paul T. Hellyer**
Minister of Finance and Receiver General, **Mitchell Sharp**
Minister of Trade and Commerce, **Robert H. Winters**
Minister of Public Works, **George J. McIlraith**
Minister of Northern Affairs and National Resources, **Arthur Laing**
Secretary of State of Canada, **Judy LaMarsh**
Minister of Justice and Attorney General, **Lucien Cardin**
Minister of Labour, **John R. Nicholson**
Minister of Fisheries, **Hédard Robichaud**
Minister of Mines and Technical Surveys, **Jean-Luc Pépin**
Minister of Veterans Affairs, **Roger Teillet**
Minister of National Health and Welfare, **Allan J. MacEachen**
Minister of Industry and Minister of Defence Production, **Charles M. Drury**
President of the Privy Council, **Guy Favreau**
Minister of Citizenship and Immigration, **Jean Marchand**
Minister of Agriculture, **John J. Greene**
Postmaster General, **Jean-Pierre Coté**
Minister without Portfolio and Leader of the Government in the Senate, **John J. Connolly**
Minister of Forestry, **Maurice Sauvé**
Minister of National Revenue, **Edgar J. Benson**
Associate Minister of National Defence, **Léo Cadieux**
Solicitor General, **Lawrence T. Pennell**
Minister without Portfolio, **John N. Turner**

In the reconstructed cabinet, Guy Favreau remained in the cabinet but was shifted to the presidency of the Privy Council. Maurice Sauvé received no promotion. Jean-Luc Pépin became minister of mines and technical surveys (his department was scheduled to be reorganized in 1966 as the Department of Resources and Energy). Jean Marchand, a Quebec labor leader, became minister of citizenship and immigration (to be reorganized as the Department of Manpower). Allan MacEachen was transferred from the labor ministry to health and welfare, where he will be in charge of Medicare. Mitchell Sharp, perhaps the most impressive member of the original Pearson cabinet, was named minister of finance. Robert H. Winters, who had been out of politics since 1957, became minister of trade and commerce.

On balance, the new cabinet appeared to be the result of the government's modest shift to the left. With Walter Gordon, the party's chief economic nationalist, out of the cabinet, and with Mitchell Sharp and Robert Winters in the two major economic posts, it also looked as if the government was changing its policy from nationalist protectionism to economic "continentalism."

The Rivard Affair. The effectiveness of the Liberal government was undermined during 1965 by an unsavory affair involving members of its party. The cause of the scandal was Lucien Rivard, a French-Canadian who was indicted in the United States in May 1964 by a Texas grand jury for smuggling narcotics from Mexico into Texas. Rivard was arrested in June near Montreal, and the United States demanded his extradition.

Pierre Lamontagne, a Montreal lawyer representing the American authorities, found himself under pressure from various persons in the Canadian government to restrain his pleading before the court. He reported to the Royal Canadian Mounted Police (RCMP) that Raymond Denis, a cabinet aide, had offered him a $20,000 bribe, and that Guy Rouleau, parliamentary secretary to the prime minister, had shown undue interest in the Rivard case.

Minister of Justice Guy Favreau decided that there was insufficient evidence to justify criminal proceedings against individuals named by Lamontagne, but he called the matter to Prime Minister Pearson's attention in September. In November, when questioned in the House about the affair, the prime minister forgot what Favreau had told him, and informed the House that he had not heard of it until much later. Reminded of his earlier knowledge, Pearson apologized for his error.

In November, before the details were made public, a Conservative member of Commons brought the matter before the House. As a result of the consequent pressure, the government agreed to appoint a one-man judicial commission to investigate alleged wrongdoing. Chief Justice Frédéric Dorion of the Quebec Superior Court was given the assignment, and the information he brought to light provided newspaper headlines for several months. In the midst of the disclosures, Rivard escaped from prison and was not recaptured for some time. Justice Dorion's report accepted Lamontagne's story, censured most individuals named by him, exonerated Guy Favreau of any wrongdoing other than misjudgment, and criticized the RCMP for questioning French-Canadian suspects in English.

Prime Minister Pearson acted decisively against all individuals who had been found guilty. He refused to accept Favreau's offer to resign, but transferred him to the minor Privy Council post. Rivard was duly extradited, found guilty in a Texas court, and imprisoned in the United States. But the uneasiness aroused by the affair was instrumental in keeping the government from winning its expected majority in the November elections.

CANADIAN-AMERICAN RELATIONS

In January, U.S. President Lyndon B. Johnson and Prime Minister Pearson signed an agreement to integrate the automotive industry on a continental basis. Details of the agreement were criticized in both countries, but the result appeared to be a large new Canadian investment in the manufacture of motor vehicles and parts. (See also AUTOMOBILES.)

In April, Prime Minister Pearson apparently annoyed President Johnson by suggesting in a speech at Temple University in Philadelphia, Pa., that a pause in American bombing of North Vietnam might encourage peaceful negotiations. The Pearson speech, however, was only a mild reflection of the stream of criticism about United States policies in Vietnam that poured from Canadian public speakers, editors, leftist politicians, university "teach-ins," and student demonstrations.

Later in the year a commission of two distinguished diplomats—the American Livingston T. Merchant and the Canadian Arnold D.P. Heeney—reported to their respective governments that quiet negotiations rather than public disagreements should be the normal procedure in Canadian-American diplomacy. Their recommendation raised a storm of protest in Canadian newspapers, which accused them of attacking the Canadian right of freedom of speech.

The government's new law forbidding foreign ownership of Canadian newspapers was also attacked as infringing on the right of freedom of the press. Tax penalties were imposed on companies advertising Canadian products in foreign periodicals distributed in Canada; but *Time* and *Reader's Digest* magazines were exempted from this ruling because they print Canadian editions in Canada, an exemption that caused criticism.

There was also continued discussion of the danger of increasing American control of Canadian business. After the U.S. government hiked interest rates and placed restrictions on investments abroad, the Canadian government followed suit. These developments were cited as further examples of the manner in which the Canadian economy is controlled from south of the border.

When some prominent Americans suggested that Canada share her freshwater supplies with water-short areas of the United States, the Canadian public indignantly accused them of seeking to undermine the free development of Canadian resources.

Altogether, events in 1965 hardly foreshadowed warmer relations between the two countries.

FRANK H. UNDERHILL
Former Professor of History
University of Toronto

THE CANADIAN ECONOMY

In his review of the economy during 1965, Minister of Finance Mitchell Sharp noted that "in terms of the pace of national economic growth, Canada has maintained a foremost position among the countries of the world." His opinion was verified by the developments of 1965.

The gross national product rose 9% in 1965 over that of 1964. Total output was up by almost 6% in all major areas, and agricultural production reached record levels. Employment was up by 3.7%, and unemployment fell below 4%. The improvement in employment was accomplished in spite of a rising rate of immigration and an increase in population.

Diversification of the economy, from basic resources production to a more broadly based structure, received major impetus in 1965. The most notable increase was in motor vehicle production, which rose by 20%, and in the manufacture of automotive parts.

While production costs rose about 3% over those for 1964, and the consumer price index was up by 2.5%, their effects were mitigated by a 5% increase in per capita income. Outlays for business expansion matched the 15% increase of 1964. Construction outpaced the labor supply, forcing the government to restrict federal building projects. Investment spending neared inflationary proportions, bringing about government restrictions.

The gap between Canada's imports and exports widened during 1965, raising the export deficit to an annual rate of $1 billion (more than twice that of 1964). Increased domestic demand for export items, combined with decreased sales to some foreign markets, adversely affected the balance of trade. Exports were up only 4%, while imports rose by 12%.

UPI

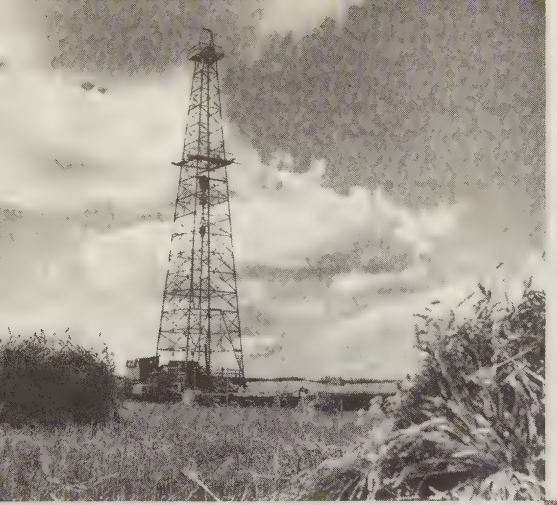
CANADIAN-FRENCH CULTURAL AGREEMENT is affirmed by a handshake between French ambassador to Canada, François Leduc (l.), and the external affairs minister, Paul Martin.

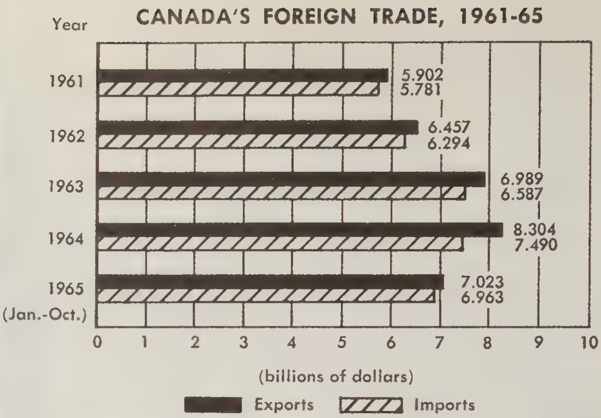
Government experts felt, however, that an inflow of United States investment capital and the sale of Canadian securities abroad would reduce the trade deficit. A sharp rise in Far Eastern markets also was expected to improve the export situation. Other favorable prospects were a $450 million purchase of Canadian wheat by the USSR and a $403 million wheat contract with Communist China.

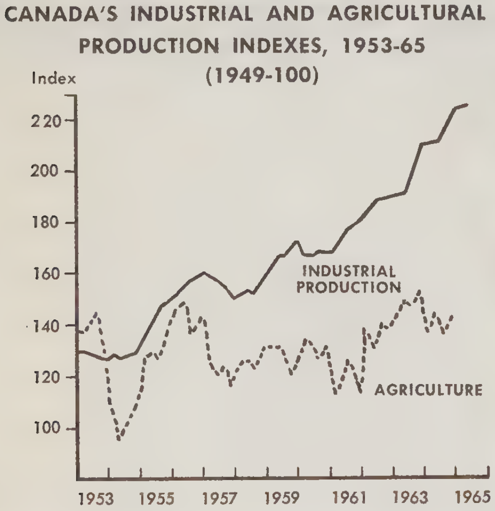
Finance. In the fiscal year ending March 31, 1965, Canada's budget deficit was reduced to $83 million (from $619.2 million in 1964). Revenues totaled about $7.2 billion (up $44 million from original estimates) and expenditures were slightly over $7.2 billion (down $1 million from the forecast). The 1965–66 budget, however, forecast a $300 million deficit, with expenditures totaling an anticipated $7.7 billion, and revenues at $7.4 billion. One reason for the increased deficit was a 10% cut in personal income taxes, which would reduce revenues by $175 million for the nine remaining months of 1965, and by $265 million for the full year. A second reason was the inauguration of a national medicare plan, with the federal government paying 50% of costs (totaling $64 million for the remainder of 1965 and expected to average $500 million in combined federal-provincial costs in a full year).

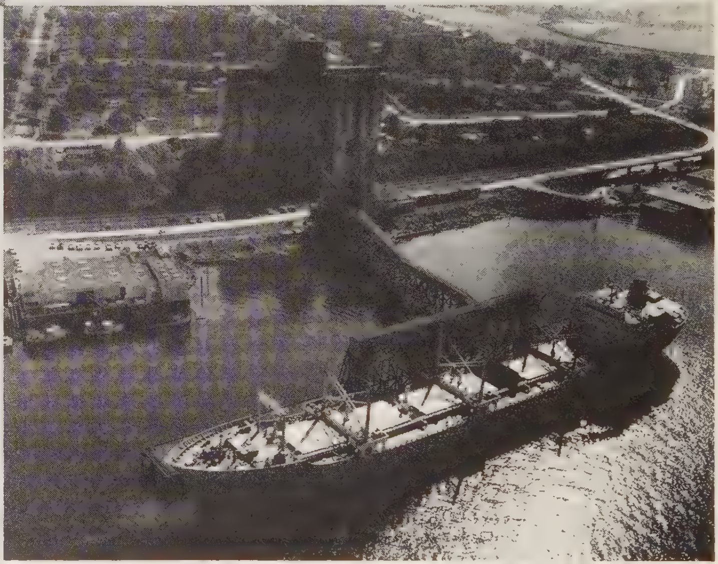
Hope for a decrease in government spending was based on funds accruing from the National Pension Plan (inaugurated Jan. 1, 1965). Under the plan, both employers and employees contribute 1.8% of salaries over $600 a year (up to a maximum of $5,000). The plan was expected to create a government investment pool of $5 billion in 10 years. These reserves would eliminate the need for heavy borrowing abroad, and in time would lower Canadian interest rates on borrowing to the level in effect in the United States.

Meanwhile, interest rates on borrowing increased. Finance companies raised rates to industrial borrowers to 5.5%, and bank discount rates to prime borrowers ranged from 4.75% to 6%. Despite discontent in financial circles with the 6% ceiling on




CANADA'S FOREIGN TRADE, 1961-65


CANADA'S INDUSTRIAL AND AGRICULTURAL PRODUCTION INDEXES, 1953-65 (1949-100)



(TOP) ANNAN; (BOTTOM) UPI

the bank rate, the government maintained the limitation, at least for the present.

Manufacturing. Canada annually registers an increase in the volume of manufactures, which showed an index of 197.2 for the first nine months of 1965 (1949=100). However, the demand for products still outstrips supply because of a labor shortage.

The monthly value of manufacturing shipments for the first seven months of 1965 averaged $2.8 billion, compared with an average of $2.6 billion for the same period of 1964. All indications pointed to an even greater increase by the end of 1965. Key factors in the continuing industrial prosperity were the expanded production of motor vehicles and automotive parts; increasing domestic oil production; and a sharp rise in iron and steel output.

The construction industry in 1965 operated at full capacity as public and private construction vied for inadequate supplies of building materials and labor. The federal government eased the demand by spacing its projects to fit production lags. Private housing starts rose by 18% over 1964 totals.

Investment in plant and equipment showed a marked advance, with an estimated increase of 18.5% over 1964 outlays. The federal government provided a vital stimulus to industry with the creation of the Canada Development Corporation.

Agriculture. While the large sales of wheat to Communist countries helped to increase Canadian exports, they were viewed as a mixed blessing by the Canadian farmer. The contract with Communist China called for sales at 12 cents per bushel less than the market price. The wheat farmer's gain in total income was dimmed by news of increased United States subsidies to American wheat farmers. These subsidies would, in effect, lower the cost of American wheat to the level of the special price set for the contract with China. The Canadian farmer receives no government subsidies; therefore, he had to consider his reduced price as permanent if he wished to remain competitive with American farmers.

Other agricultural products were exported in sizable quantities. Shipments of meat and animal products brought over $150 million; oilseed and products, over $100 million; dairy products, more than $60 million; tobacco, about $36 million; and fresh fruits, over $20 million.

A monthly average of 621,000 persons were employed in agriculture during 1965. Cash farm income in 1965 was about $865 million, holding level with the 1964 total (including grain, $320 million; vegetables and field crops, $60 million; cattle and calves, $170 million). Milk production totaled 1.6 billion pounds (equal to 1964), and eggs, 37 million dozen. The sale of hogs was down 9% from 1964, to 5.4 million, and poultry sales were 75.7 million.

The government earmarked $125 million over the next five years for projects in ten major areas across

Canada to improve the lot of farmers who live below subsistence levels.

Mining. Mineral production was valued at $3.7 billion in 1965, showing an increase of 10.3% over the $3.4 billion reported for 1964. Values were higher for copper, iron ore, lead, zinc, nickel, natural gas, and crude petroleum. Values for gold, uranium, asbestos, and coal were lower.

In 1965, metals, ores, and concentrates were up in value by 12.9% over 1964, to $1.9 billion. Nickel showed the highest increase—$435 million in 1965, compared with $379 million in 1964. The value of nonmetallic minerals was up 9.5% from $284 million in 1964 to $311 million in 1965, although asbestos dropped slightly, from $145 million to $140 million. Mineral fuels topped $1 billion (from $999 million in 1964), with crude petroleum up to $718 million.

Structural materials increased in value by $20 million, to $423 million in 1965. Cement was the highest gainer, with $145 million ($131 million in 1964).

New developments in the mineral industry included a major increase in potash production and the discovery of a vast iron lode in Baffin Island. The government announced plans to stockpile uranium, and interest increased in the mineral potential of the Yukon and the Northwest Territories.

Foreign Trade. Export shipments (including re-exports) in the first nine months of 1965 averaged $712 million monthly. The United States was the principal market, taking over $407 million monthly. Imports in the same period averaged $700 million monthly, with the United States the major supplier.

The market for domestic exports, however, showed a varying picture during 1965. Exports increased to the United States, the Benelux countries, Norway, Australia, and South Africa, but decreased to Britain, Communist China, Japan, and West Germany.

Another heartening factor was the emergence of Japan as a major new market in 1965. There was also a phenomenal increase in exports of Canadian automotive products (up 200% over 1963).

Transportation. Roadbuilding received a major impetus during 1965. One area was the province of Quebec, where efforts are being made to improve highways for the 1967 Canadian world's fair. The second area is the Yukon and Northwest Territories, where a roadbuilding program is in progress to help exploit their mineral resources.

Airline service was improved by the introduction of nonstop service between western Canada and Britain. An all-cargo jet service began between Montreal and Vancouver. Also, a bilateral air treaty was signed with the United States.

Communications. A new long-range marine radiotelephone station was opened in Vancouver. Mail carrier service was extended to 62,000 more families. However, mail service throughout Canada was interrupted by a postal strike in July.

Both the French- and English-language radio and television networks were expanded during the year. Color television was scheduled to begin in 1967.

CANADIAN LITERATURE

With the 100th anniversary of Canada's confederation but two years away, Canadian writers in English produced more books about public affairs in 1965. Besides analyses of the political and social scenes, works of imaginative literature and scholarship interested readers from coast to coast.

Public Affairs and History. The national mosaic was dissected and analyzed as usual in such works as Peter Desbarats' *The State of Quebec,* Thomas Sloan's *Quebec: The Not-so-quiet Revolution,* and Richard Laskin's *Social Problems: A Canadian Profile.* In *Ten to One,* Marcel Faribault and Robert M. Fowler wager that the country can survive, but Vincent Massey warns in *Confederation on the March* that "too many of us have lost the concept of Canada." In *Lament for a Nation,* George Grant criticizes the "wealthy and the clever" for allowing the country to become part of what he calls the universal American empire. John Porter's well-documented analysis, *The Vertical Mosaic,* controversially, ruthlessly, and objectively studies social class and power in the country. In this sociological study he denies that Canada is a land of opportunity for all.

Several books about religion attracted considerable attention. Pierre Berton provoked nationwide religious controversy with *The Comfortable Pew.* Catholic laymen spoke their minds in *Brief to the Bishops,* edited by Paul T. Harris. Simma Holt's *Terror in the Name of God* again drew attention to the Doukhobors.

An election year, as 1965 was, automatically provides material. Heath Macquarrie wrote *The Conservative Party;* George Hogan presented party principles in *The Conservative in Canada;* and Robert M. Thompson, leader of the Social Credit party, published *Commonsense for Canadians.* Other cures for Canada's ailments appeared in *The Prospects for Change,* edited by Abraham Rotstein.

Among the less imposing works on Canada was Margaret McIntyre's *Place of Quiet Waters,* concerning Sechelt, in British Columbia. But for homely philosophy, descriptive geography, and sometimes questionable history, one should read Edward McCourt's *The Road Across Canada,* about motoring from St. John's to Victoria. Though all who know the road will disagree with parts of this book, nearly all will wish that they had written it.

The expected military works were forthcoming. James Eayrs' *In Defence of Canada* exonerates the regular officers of 1919–39 from responsibility for Canada's unpreparedness, and blames politicians and an indifferent public. Andrew Brewin's *Stand on Guard* pleads for a nuclear-age defense policy in the form of a world community. Other works consider specific wars: Donald Pearce's *Journal of a War* depicts the ghastly Europe of 1944–45; Gregory Clark, the old storyteller, spins *War Stories* of two wars; and Ernest G. Black's *I Want One Volunteer* humorously returns to 1916.

Poetry. In *Pauline Johnson,* a biography and a collection of poetry and prose, Marcus Van Steen attempts to rehabilitate the Canadian Indian poetess who died in 1913. Alfred Purdy's mistitled *The Cariboo Horses* contains one particularly good poem, "Homo Canadensis," a socio-psychological study of the species. More profound and controlled is Michael Parr's first volume, *The Green Fig Tree,* consisting of poems about love, nature, and religion. His imagery and sounds, as well as his unobtrusive, scholarly, and perfect use of classical allusions, all delight; but most delightful is his sure, self-disciplined use of old verse forms and his unabashed pride in using them.

Fiction. New fiction abounded in 1965. Arthur Hailey's *Hotel* weaves together six or seven plots, but his characters have no depth. The characters in David Walker's *Mallabec* have no depth either, although the novel absorbs a reader's interest up to the unjustified denouement. In contrast, Charles Israel's *Shadows on a Wall,* about a Los Angeles couple who adopt a mentally disturbed Ghanaian girl, shows the deep shadowy relationships of love and race. The novel almost demands that the reader evaluate his own claims to toleration. In *A Gift of Echoes,* Robert Harlow probes the brutal and unnecessary tragedy in those small, rough lumber camps where human relationships are closely entangled.

Sex provides the theme and story of the year's most audacious novel, Stephen Vizinczey's *In Praise of Older Women.* This witty and joyful book has lusty overtones reminiscent of the works of Benvenuto Cellini and Henry Fielding. Set mostly in Hungary during and after World War II, but with Canada as a later locale, the hero emerges from a series of love affairs without a neurosis of any kind.

Juveniles. Canadian literature for children was especially appealing. With a sense of authenticity, Cliff Faulknor's *The White Calf* tells of a Piegan Indian boy who finds a buffalo calf, takes it home, and grows up that summer as the result of the experience. Donald Dodds' simple, fascinating, and sometimes horrifying *Wild Captives* follows from birth some Newfoundland animals as they fearfully meet or miss death from man or other predators. Two beavers befriended by Cree Indian children appear in *Rusty and Susie,* a lively tale by H. Clifford Dunfield. Paul St. Pierre's adaptation of one of his successful *Cariboo Country* television stories, *Boss of the Namko Drive,* is a thrilling account of a young boy's experiences as he moves a herd of cattle to the railhead.

Material with history as background also provided good reading. Margaret Bemister's *The Arrow Sash* steps back in time to the bride ships of Quebec. James Reaney cleverly returns to the printing press of William Lyon Mackenzie in *The Boy with an R in His Hand.* John Bassett involves two Welland boys in an exceptionally believable story, *The Canal Builders.* In *Substitute General,* John Reymayne's hero Peter Maclean stands in for Napoleon Bonaparte and uncovers a plot to kill him.

White-Indian relationships are ably contrasted in two excellent books. Louella Creighton's *Tecumseh* gracefully and sympathetically traces the life of the great warrior and the arrogant betrayal of the Indian by the whites. Christie Harris' *West with the White Chiefs* retells the trek of Milton and Cheadle through the Rocky Mountains to the Pacific. The focus is on young Louis, the Assiniboine Indian boy who learns the laws of life. He discovers that there are only two kinds of people, not white and Indian, but people "who delude themselves, and people who tell themselves the truth."

Biography. Two autobiographies recalled Canada's past. George Shepherd's *West of Yesterday* provides details of pioneer life on the prairies after 1908. Guy Lawrence's *Forty Years on the Yukon Telegraph* pictures a young English boy who comes to Canada too late to find gold but remains in the country.

Biography was exceptionally good. Joseph Schull's *Laurier,* a somewhat flashy and sometimes questionable account of the old prime minister, is still good reading. Exceptional also is Phyllis Grosskurth's *John Addington Symonds,* a skillfully written, scholarly account of the homosexually tormented writer and the Victorian England in which he lived. This biography won the Governor General's award for nonfiction.

Literary History. The crowning scholarly work of the year was *Literary History of Canada: Canadian Literature in English,* prepared under the general editorship of Carl F. Klink. The labor of 33 scholars, this brilliant book chronologically follows literary trends and influences from 1510 to the present, and includes much on religion, politics, philosophy, science, and exploration.

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FRENCH CANADIAN LITERATURE

Creative writing dominated the French Canadian literary scene in 1965. The year was mainly productive in good French Canadian fiction. Several good novels and interesting books of short stories appeared. No less than eight novels or books of short stories were by authors who had previously published books of verse. Poetry itself, however, exhibited few remarkable achievements.

Fiction. The poet Georges Cartier was awarded the Prix du Cercle du Livre de France for his first novel, *Le poisson pêché.* The story concerns a French Canadian in Paris who hesitates whether to go back home or to stay in France, where he feels both at home and in exile.

Two previous winners of the same prize published good second novels: *L'eau est profonde,* by Diane Giguère, and *L'île joyeuse,* by Louise Maheux-Forcier. Both deal with disappointments of adult women in contrast with their happy memories of youth. Jacques Godbout's second novel, *Le couteau sur la table,* is a sketchy but clever analysis of what brought a young French Canadian man and an English Canadian girl together and of how their intimacy ends.

Other brilliant new novels are *L'incubation,* by Gérard Bossette; *La jument des Mongols,* by Jean Basile; and *La nuit,* by the satirist Jacques Ferron, who again supplies some good fun. Jean Hamelin does the same in the best volume of short stories of the year, *Nouvelles singulières.*

Poetry. Universal themes such as love and death, freedom, and winter continued to retain the attention of French Canadian poets. They nevertheless have been increasingly influenced by contemporary events, as was clearly evidenced in 1965 by the publication of such works as *Pour les âmes,* by Paul-Marie Lapointe; *Le soleil sous la mort,* by Fernand Ouellette; *L'afficheur hurle,* by Paul Chamberland; *Mémoire,* by Jacques Brault; and *L'honneur de vivre,* by Gilbert Choquette.

Nonfiction. The best book of the year might very well be the remarkable essays collected by Fernand Dumont in *Pour la conversion de la pensée chrétienne.* The sociologist and poet studies the basic religious problems facing Christians in the present years of revival and reform brought about by the Ecumenical Council. Jean Simard, on the other hand, discusses arts and letters and contemporary French Canadian society in his *Nouveau répertoire.* The autobiographical *Sous le soleil de la pitié,* by Jean-Paul Desbiens (Brother Anonymous), is a significant document on contemporary Quebec.

Other interesting books include the novelist Ringuet's posthumous *Confidences;* Marcel Gagnon's new biography, *Arthur Buies;* Louis-Philippe Audet's *Histoire du Conseil de l'Instruction publique de la province de Québec;* Roger Duhamel's *Aux sources du romantisme;* and Paul Toupin's controversial and polished *L'écrivain et son théâtre.*

GUY SYLVESTRE
Associate Parliamentary Librarian
Library of Parliament, Ottawa

CANALS

In the space age, water transportation still plays an important role. In fact, the Saturn booster rockets for the Apollo moon program are so big they cannot be transported by railroad or highway, and barges must do the job. Produced at the Michoud plant near New Orleans, the rockets are shipped by barge to the nearby Mississippi Test Facility for static testing, and then go via the Gulf of Mexico to NASA's launch site at Cape Kennedy, Fla.

Cross-Florida Canal. Construction was in full swing in 1965 on the $158 million, 185-mile barge canal across northern Florida. Talked about since the days of the Spanish colonists, the project will provide a 12-foot-deep, 150-foot-wide waterway from Jacksonville on the east coast to Yankeetown on the Gulf of Mexico. As opposed to the sea-level canal for oceangoing ships started by the Roosevelt administration in 1935, the canal now under way is for shallow-draft shipping. It has five locks to lift barge tows over the so-called summit of Florida, a low plateau in the central part of the state.

Panama Canal. Surveys and studies in 1965 delved into financing, construction, and operation of a new sea-level canal linking the Atlantic and Pacific oceans. Many observers felt that Panama may well be the site eventually chosen. Abrogating the original 1903 treaty, President Johnson and Panama's President Marco Robles in 1965 signed a new treaty giving Panama sovereignty over the existing Panama Canal Zone and permitting Panama to share management of the old canal with the United States. A sea-level canal across Panama would probably be the least expensive waterway to construct since it could follow the present route for the most part. In essence, this route would involve elimination of the present locks, the biggest bottleneck on the canal. Alternative routes also being surveyed are a different route through Panama, east of the existing canal: one through Colombia near the Panamanian border; and another along the Costa Rican-Nicaraguan border.

California Aqueduct. One of the most spectacular canal construction projects under way is part of California's State Water Project, a $2.5-billion program to convey annually more than 2 million acre-feet of northern California water to the southern part of the state. In 1965, construction contracts worth $300 million were under way for 200 miles of the 444-mile aqueduct, much of which is a concrete-lined canal. Huge canal-lining machines, resembling a cross between standard highway pavers and harvesting combines, move along the excavated sections of canal, casting the concrete floor and sloping sides of the canal in a continuous operation. (See also WATER SUPPLY.)

Chesapeake and Delaware Canal. Construction continued in 1965 on a major improvement program for the old waterway connecting the Delaware River and Chesapeake Bay north of Baltimore. The $99 million project to deepen, widen, and straighten the canal also includes major highway and railroad bridge construction.

Welland Canal. As soon as the St. Lawrence Seaway closed for the winter of 1965–66, Canadian contractors moved in to perform the phases of the construction that would have interfered with shipping on a project to twin the last five locks on this key link of the seaway. The other Welland locks already have twin locks.

ENGINEERING NEWS-RECORD

CROSS-FLORIDA CANAL will provide a direct waterway from the Gulf of Mexico (foreground) to the Atlantic Ocean. Work was in full swing in 1965 on the $158 million project.

Saimaa Canal. Finland is building a $58 million waterway to link Lake Saimaa with the Bay of Finland. The 34-mile canal runs for 12 miles in the USSR under a 1963 treaty permitting a 50-year lease.

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CANCER

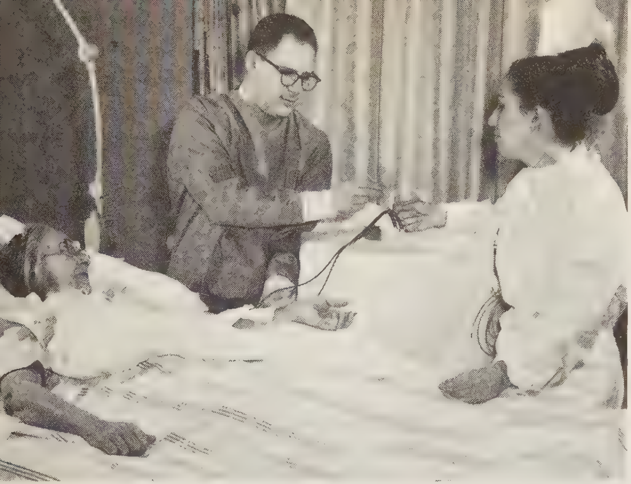
The U.S. government, national organizations, and research centers increased their efforts in 1965 toward finding ways to control and cure cancer. International cooperation in the fight against cancer was established during the year. However, there was no major breakthrough in the treatment of cancer.

Institutional Programs. The National Institutes of Health allocated $140 million for cancer research in 1965, and another $15 million was being used to identify leukemia viruses and to develop methods for preventing and controlling human leukemia. The National Cancer Institute appointed task forces to hasten the control of lymphomas and breast cancer, and the American Cancer Society contributed $13 million for cancer research.

The major recommendations of the President's Commission on Heart Disease, Cancer, and Stroke concerning the creation of regional clinical centers for training, treatment, and research were approved by Congress and President Johnson. The National Cancer Institute is at Bethesda, Md.

The International Agency for Research on Cancer was established in 1965 with the assistance of the World Health Organization. The current sponsors—France, the United States, Great Britain, West Germany, the Netherlands, and Italy—have each made an initial contribution of $150,000.

Incidence of Cancer. The American Cancer Society estimated the number of new cases of cancer in the United States during 1965 at 550,000, and the number of deaths from cancer at 295,000. Although the



BROOKHAVEN NATIONAL LABORATORY

CANCER PATIENT receives radiation treatment for leukemia. The heart pumps blood through tubing to a container, where it is irradiated by gamma rays before returning to the body, avoiding direct radiation of the patient.

yearly incidence of most forms of cancer has been stable, new cases of cancer of the cervix of the uterus, stomach cancer, and cancer of the liver have decreased. Cases of lung cancer (the number of deaths in 1965 was estimated at 47,000), cancer of the pancreas, and leukemia have increased. The remarkable drop in the incidence of stomach cancer has been related to improved nutrition.

Smoking and Cancer. The relationship between the use of cigarettes and lung cancer is widely accepted, and the U.S. Public Health Service and private organizations are attempting to discourage cigarette smoking. The percentage of men who smoke has been reduced from 59% in 1962 to 52% in 1965, and a report issued in January 1965, estimated that 3,300,000 men and 200,000 women had stopped smoking in the past two years. Congress has directed that cigarette packages carry the label "Caution: cigarette smoking may be hazardous to your health." But the rise in the incidence of lung cancer continues. Statistics indicate that the yearly rate of new cases among American men is 40 per 100,000.

Viruses. Viruses produce leukemias and other types of cancers in laboratory animals, but attempts to find viruses associated with leukemia in human beings have been unsuccessful thus far. Although several preliminary reports have suggested such an association, their conclusions have been questioned by others. Some investigators have reported the presence of "virus-like" particles in the blood cells and serum of leukemia patients, but others believe that these particles are fragments of platelets or are a pleomorphic microorganism, mycoplasma (PPLO).

Antibodies. If a human cancer contains a specific antigen, it may be possible to assist the body to produce antibodies that can eliminate the residual cancer cells after the bulk of the cancer has been destroyed by surgery, radiotherapy, or chemotherapy. This method has been used for leukemia patients. Leukemic cells are removed from a patient and stored. After a remission is produced by chemotherapy, an extract of these cells is injected into the patient in the hope of producing antibody formation against the few persistent leukemic cells that almost inevitably restore the leukemic process. The benefits of the procedure are not known.

Therapy. There were no major advances in the treatment of cancer in 1965. Dr. E.P. Cronkite, at the Brookhaven National Laboratory, and Dr. E.D. Thomas, of the University of Washington, independently treated leukemia by irradiating the blood while it is circulated through tubes outside the body. This method destroys the abnormal cells, and it avoids direct irradiation of the patient.

Intensive combination-drug therapy is being used in an attempt to increase the survival rate in acute leukemia cases by destroying the maximum number of leukemic cells. Although serious damage to normal tissues will occur, the patient is sustained by blood and platelet transfusions during the period of injury to the normal bone marrow. Plastic envelopes large enough to enclose a bed keep a patient under almost sterile conditions in order to minimize exposure to infection.

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CATHOLIC CHURCH. See RELIGION—*Catholicism;* ROMAN CATHOLIC CHURCH.

CENTRAL AFRICAN REPUBLIC

The government of the Central African Republic was overthrown on Dec. 31, 1965. Col. Jean Bedel Bokassa, Army chief of staff, seized power and

ASIA
S. AMERICA

—CENTRAL AFRICAN REPUBLIC · Information Highlights—

Area: 238,224 square miles.
Population: 1,320,000 (July 1, 1964, est.).
Chief City (1964 census): Bangui, the capital, 111,266.
Government: *Head of State*—Col. Jean Bedel Bokassa (seized power Dec. 31, 1965). *Parliament*—National Assembly, 50 members, all belonging to the Movement for the Social Emancipation of Black Africa (MESAN).
Religious Faiths: Tribal religions, 60% of population; Protestants, 15%; Roman Catholics, 13%; others, 12%.
Education: *Total school enrollment* (1962)—90,615 (primary, 87,528; secondary, 2,402; teacher-training, 342; technical, 343).
Finance (1964): *Revenues,* $25,500,000; *expenditures,* $26,700,000; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1962): $51,000,000.
Economic Index: Cost of living (1964), 125.60 (1960=100).
Manufacturing: Beer (1963), 66,000 hectoliters; lumber (1962), 41,000 cubic meters; meat (1961), 11,000 metric tons.
Crops (metric tons): Peanuts (1963–64), 75,000 (ranks 20th among world producers); cassava (1961–62), 2,200,000; sweet potatoes and yams (1961–62), 90,000; cottonseed (1964–65), 22,000; cotton lint (1964–65), 11,000; coffee (1964–65), 8,700.
Minerals (1964): Gem diamonds, 221,000 carats (ranks 10th among world producers); gold, 75 troy ounces.
Foreign Trade (1964): *Exports,* $28,900,000 (chief exports: diamonds, $12,400,000; coffee, $8,000,000; cotton, $5,600,000); *imports,* $29,800,000 (chief imports, 1963: motor vehicles, $3,100,000; woven cotton fabrics, $2,500,000; non-electrical machinery, $1,900,000). *Chief trading partners* (1963): France (took 47% of exports, supplied 60% of imports); United States (took 18% of exports, supplied 5% of imports); Israel (took 24% of exports).
Transportation: *Roads* (1964), 11,325 miles (54 paved); *motor vehicles* (1964), 6,150 (automobiles, 1,850); *Principal airport,* Bangui.
Communications: *Telephones* (1964): 2,300; *radios* (1963), 20,000; *newspapers* (1962), 1 (daily circulation, 400).

arrested and imprisoned President David Dacko and several cabinet ministers. Colonel Bokassa said that the coup was necessary to end social injustices.

Relations With Communist China. After the coup, Colonel Bokassa announced the expulsion of all Communist Chinese nationals from the Central African Republic. Earlier in the year, on January 14, Communist China established a diplomatic mission in the Central African Republic. At that time the two countries signed an accord which provided for a long-term Chinese loan of more than $4,000,000 for aid and for the development of light industry.

Diamond Mining. During 1965, diamonds became the most important cash product of the Central African Republic. Nearly 500,000 carats were produced, accounting for about $20,000,000, or about 75% of the total value of the country's exports.

President Dacko's Trip. For 45 days during May and June, Dacko visited France, West Germany, Luxembourg, Switzerland, Italy, and Greece. Upon his return, he indicated that prospects for aid and trade looked promising.

Economic Development. In July, the Central African Republic received a loan of $1,000,000 from West Germany's Reconstruction Credit Office to help finance small and medium-sized enterprises in agriculture, commerce, and handicrafts.

In August, the cornerstone of a $10,000,000 textile complex, Industrie cotonnière centrafricaine, was laid at Bangui. The complex, which is owned jointly by a French textile group and the Central African Republic, will employ up to 1,000 workers and produce up to 8,000,000 meters of cloth annually.

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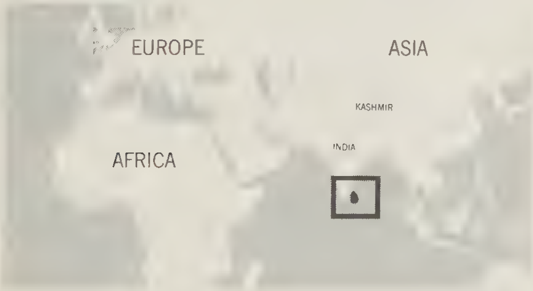
CENTRAL AMERICA. See LATIN AMERICA and the articles on Central American countries.

CEYLON



The United National Party (UNP), under the leadership of Dudley Senanayake, won 66 of the 151 elected seats in the Ceylonese parliament in elections held on March 22, 1965. As the new prime minister, Senanayake also had the support of the Tamil Federalists and other smaller parties, thereby obtaining control of 90 seats. Mrs. Sirimavo Bandaranaike, the former prime minister whose Sri Lanka Freedom party (SLFP) won 41 seats, was reelected, as were many of her government's leaders. Although the UNP clearly gained control of the government, the party faced a strong opposition in Parliament.

New Government. The new government introduced a significant reversal of the trend toward leftist policies that had occurred under the prime ministership of Mrs. Bandaranaike. While pledging a continuation of political nonalignment and friendship to all, the Senanayake government moved quickly to reassure Western powers. Political concessions that had been granted to Communist countries by the former government have been curtailed, and policies were established in both the political and economic spheres to improve Ceylon's relations with Western nations.

United States Resumes Economic Aid. In July the United States agreed to resume its economic aid program to Ceylon in response to the new government's assurance of compensation for properties of three Western oil companies that had been seized by the former government in 1962. Prior to the curtailment of aid, Ceylon had received nearly $90 million in assistance under the program. The resumption of U.S. aid is expected to play an important part in the country's economic recovery.

Economy. In 1964, Ceylon approached the brink of economic disaster. The quick action of the Senanayake government to reinstitute U.S. aid was followed by a statement of fiscal policy designed to stimulate foreign investment in Ceylon.

On August 9, Finance Minister Ukku Banda Wanninayake presented the new government's first budget. He announced the immediate easing of the former government's moratorium on the remittance of dividends, interest, and profits to foreign investors, hoping to attract the investment of foreign capital by assuring the repatriation of profits. The terms for such investment are to be explicitly outlined. Wanninayake also announced the abolition of import duties on certain vegetables and kerosene,

CEYLON · Information Highlights

Area: 25,332 square miles.
Population: 10,965,000 (June 30, 1964 est.).
Chief Cities (1963 census): Colombo, the capital, 510,947; Jaffna, 94,248; Moratuwa, 77,632; Kandy, 67,768.
Government: Governor *General*—William Gopallawa; *Prime Minister*—Dudley Senanayake, took office March 25, 1965. *Parliament*—House of Representatives, 151 representatives; *party seating* (1965): United National, 66; Sri Lanka Freedom, 41; Tamil Federal, 14; other parties, 24; independents representing special interests, 6. Senate, 30 senators.
Religious Faiths: Buddhists, 64% of population; Hindus, 20%; Muslims, 7%; Roman Catholics, 7%.
Education: *Literacy rate* (1953)—68% of population aged 15 and over. *School enrollment* (1962; excluding higher schools)—2,351,433 (primary, 1,648,858; secondary, 702,575); higher (1961), 11,296.
Finance (1964 est.): *Revenues,* $347,000,000; *expenditures,* $455,000,000; *net public debt,* $700,000,000; *monetary unit,* rupee (4.7619 rupees equal U.S.$1).
Gross National Product (1964): $1,518,000,000.
National Income (1964): $1,366,000,000; average annual income per person, $125.
Economic Indexes: *Industrial production* (1963), 139 (1958=100); *agricultural production* (1964), 129 (1956–57=100); *cost of living* (1964), 107 (1958=100).
Manufacturing (metric tons, 1963): Cement (1964), 75,000; meat, 17,000; sugar, 5,000; cotton yarn, 1,500; beer, 50,500 hectoliters.
Crops (metric tons, 1963–64 crop year): Rice, 1,026,000 (ranks 17th among world producers); tea (1964), 218,500 (world rank, 2nd); rubber (1964), 111,600 (world rank, 4th); cassava, 312,000; sweet potatoes and yams, 52,000.
Minerals (metric tons, 1963): Salt (1964), 58,000; ilmenite, 19,088; graphite (1964), 10,838 (exported); kaolin, 1,016; monazite (1961), 217.
Foreign Trade: *Exports* (1964), $394,000,000 (chief exports: tea, $240,000,000; rubber, $61,000,000; coconut products, $57,000,000); *imports* (1963), $415,000,000 (chief imports: rice, $40,000,000; refined sugar, $15,000,000; wheat meal and flour, $13,000,000). *Chief trading partners* (1963): Britain (took 31% of exports, supplied 20% of imports); Communist China (took 6% of exports, supplied 9% of imports); India (took 3% of exports, supplied 10% of imports).
Transportation: *National roads* (1964), 12,688 miles (8,590 paved); *motor vehicles* (1964), 128,315 (automobiles, 82,812); *railways* (1963), 898 miles; *national airline,* Air Ceylon Ltd.; *principal airport,* Colombo.
Communications: *Telephones* (1964): 41,000; *radios* (1962), 397,000; *newspapers* (1960), 8 (daily circulation, 356,000).

CAMERA PRESS–PIX

DUDLEY SHELTON SENANAYAKE, sworn in as prime minister of Ceylon on March 25, 1965, addresses the crowd after the success of his supporters had been assured in the March elections. He immediately set to work to heal the breach that had developed between Ceylon and the West during the administration of his predecessor, Mrs. Sirimavo Bandaranaike, promising a "truly unaligned" administration and a "national, not a party government."

Senanayake was born in Colombo, Ceylon, on June 19, 1911. He was the son of Don Stephen Senanayake, the first prime minister of Ceylon (1947–52) after the country achieved independence. He graduated from Corpus Christi College at Cambridge University, studied law at Middle Temple, London, and was called to the bar in 1934. He served in the state council of Ceylon (1936–37) and was minister of agriculture and lands (1947–52). Succeeding his father as prime minister in 1952, he held the post until 1953, and again briefly in 1960.

and ended tariffs on small farm implements and sporting goods.

Sinhalese Nationalism. Although the government promised to encourage the use of the Sinhalese language, it is expected to retreat markedly from the disruptive pro-Sinhalese policy of the Bandaranaike government. Senanayake has pledged special concessions to the Ceylon Tamil minority, and three of his 15-member cabinet are Tamil Federalists.

Cyclone Disaster. In 1965, Ceylon still felt the effects of the disastrous cyclone of Dec. 22, 1964, that caused vast damage to crops, food storehouses, homes, and fishing fleets. The death toll was estimated at 650 persons, most of whom were fishermen lost at sea.

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CHAD

Chad's internal politics were relatively quiet during 1965, but its relations with neighboring Sudan were disturbed.

Foreign Affairs. In February, Chad became a member of the Organisation Commune Africaine et Malgache (OCAM: Joint Organization of African and Malagasy States), a new international group designed to strengthen political and economic cooperation among the French-speaking African states.

In June, Chad threatened to break relations with Sudan, with which it shares 500 miles of frontier. The long-simmering issue between the two countries concerned Sudan's granting asylum to Chadian opposition elements operating in Khartoum, the capital of Sudan, as the "Government of the Islamic Republic of Chad." This group, according to President François Tombalbaye of Chad, aims to deliver northern Chad to "foreign governments" that seek its oil and other minerals, to replace the present government with an all-Muslim regime, and to convert the country's 153,000 Christians to Islam. The president charged that the Sudanese government has been providing arms, money, and advice to the exiles.

The crisis was settled after a Sudanese goodwill mission visited Fort-Lamy, the capital of Chad. On July 1 the negotiators announced an agreement whereby Sudan promised to expel Chadian subversives and assist in solving common frontier problems.

Economic Progress. Modest advances were made in Chad's attempt to attract foreign aid and capital investment. Aid and cooperation agreements concluded in 1965 between France and Chad provided for two French government loans. One, for $2,653,200, was for agricultural development; the other, for $1,000,000, was to improve education.

In January, Chad signed an agreement with a French-German private consortium to establish a textile complex at Fort Archambault. The West German government granted Chad a $2,000,000 development loan to help finance the new industry.

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CHAD · Information Highlights

ASIA
S. AMERICA

Area: 495,752 square miles.
Population: 3,300,000 (July 1, 1964, est.).
Chief City (1963 est.): Fort-Lamy, the capital, 91,700 (urban).
Government: *President*—François Tombalbaye (took office August 12, 1960). *Parliament*—National Assembly, 75 members (all belonging to the Parti Progressiste Tchadien).
Religious Faiths: Muslims, 52% of population; tribal religions, 43%; Roman Catholics, 3%; others, 2%.
Education: *Total school enrollment* (1962)—115,956 (primary, 112,863; secondary, 2,685; teacher-training, 193; technical, 215).
Finance (1965 est.): *Revenues*, $33,900,000; *expenditures*, $33,900,000; *monetary unit*, CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1962): $120,000,000.
Economic Index: *Cost of living* (1964), 143 (1958 = 100).
Crops (metric tons): Cottonseed (1964–65), 67,000; cotton lint (1964–65), 37,000; dates (1962–63), 25,000; peanuts (1962–63), 140,000.
Mineral (metric tons, 1964): Natron, 7,300.
Foreign Trade (1964): *Exports*, $26,500,000 (chief export: cotton, $20,900,000); *imports*, $34,600,000 (chief imports, 1963: petroleum products, $4,400,000; motor vehicles, $2,600,000; woven cotton fabrics, $1,900,000). *Chief trading partners* (1963): France (took 55% of exports, supplied 53% of imports); Nigeria (took 14% of exports, supplied 3% of imports); Netherlands Antilles (supplied 10% of imports).
Transportation: *Roads* (1964), 8,072 miles (16 paved); *motor vehicles* (1964), 5,705 (automobiles, 2,370); *principal airport*, Fort-Lamy.
Communications: *Telephones* (1964): 2,472; *radios* (1963), 18,500; *newspapers* (1961), 1 (daily circulation, 700).

CHEMISTRY

The production of elements and compounds by the U.S. chemical industry in 1965 continued to show an upward trend similar to that of other large industries. In 1964, production of chemicals increased by 6%, and sales totaled a record $36 billion.

Estimated production of heavy metals in 1965 was (in million tons): pig iron, 95.0; aluminum, 2.7; copper, 1.3; zinc, 0.6; and lead, 0.3. Production of the leading inorganic chemicals in 1965 was (in million tons): sulfuric acid, 24.2; lime, 15.5; ammonia, 8.4; sodium hydroxide, 6.8; sulfur, 6.4; and sodium carbonate, 4.8. Of the latter, ammonia production grew the most rapidly, and the output of ammonia plants under construction in 1965 will probably double production within three years.

In the organic field in 1965, petroleum was the source of 19 million tons of products of all types. The output of benzene, made largely from petroleum hydrocarbons, amounted to 3.1 million tons, and toluene totaled about 2.7 million tons. The increased amounts of benzene were the result of dealkylation of toluene. The output of resins and plastics amounted to over 10 million tons, or about twice that of all metals except iron.

The production of synthetic textiles of all types totaled nearly 1.5 million tons in 1965. Synthetic rubber production, totaling four times the amount of imported natural rubber, was a little less than 2 million tons.

Metals. The completion of basic oxygen furnaces begun in the autumn of 1964 enabled the steel industry to make about 36.5 million tons of steel by this process in 1965. The earliest-built basic oxygen furnaces have a capacity of 60 tons of steel per heat. Two recently installed furnaces have capacities of 250 tons each, and another may have a capacity of 300 tons. The steel industry is also capable of making a higher grade product by vacuum degassing and continuous casting.

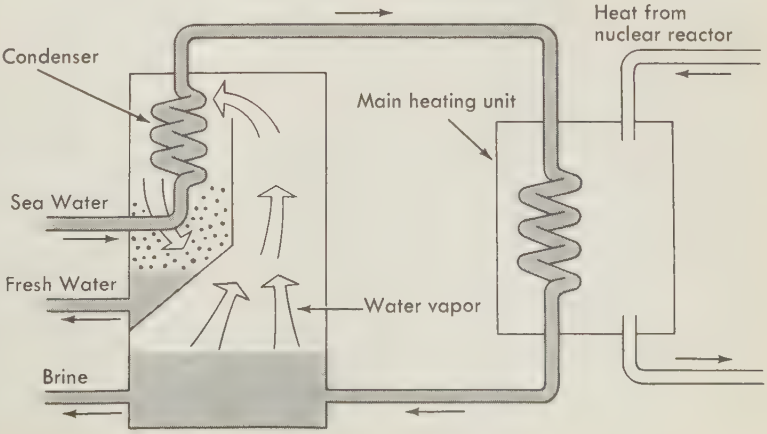
To meet the competition of tin plate and plastics in the packaging field, the steel industry is making light-gauge, flat-rolled steel coated with aluminum. To manufacture this product, the coating metal is vaporized in a crucible by an electron beam, and moving strips of steel pass through the metal vapor in a vacuum to avoid the formation of aluminum oxide. Aluminum-coated steel has high lacquer adhesion, formability, and corrosion resistance.

Small-volume plants are making use of a new copper production process that not only enables them to compete with larger plants using conventional methods, but also eliminates air and water pollution. In this process, copper sulfate solutions, obtained by acid leaching of copper ores, are exposed to detinned iron cans, precipitating a powder with from 84% to 88% copper. The powder is washed from the iron, dried, and leached at 140°F with a solution of sulfuric acid through which air is blown. Ferric hydroxide and other impurities are filtered off, and the filtrate is preheated and reduced with hydrogen in an autoclave at 300°F under a pressure of 4,000 psi (pounds per square inch). The product, of electrolytic grade, is formed either by powder metallurgical methods or by melting.

Investigations of the properties of thin-film tantalum have revealed a new phase, called beta tantalum, that has radically different properties from common tantalum. Beta tantalum has higher resistivity and a lower temperature coefficient of resistance than ordinary tantalum, and it becomes a superconductor at a much lower temperature. Beta tantalum may be used, like the ordinary form, in the manufacture of capacitors for electronic, thin-film circuits because it readily forms oxides and can be anodized by usual techniques. Its high resistivity and low temperature coefficient will make it useful as a thin-film resistor. Although beta tantalum was discovered in connection with evaporation and chemical-vapor deposition processes, most of the material examined is now produced by cathode sputtering in argon at low pressure and in the presence of other gases in very small amounts. Further studies are being made to determine whether the new material is an allotropic modification of ordinary tantalum or an impurity-stabilized phase. Research will determine whether it can be produced in bulk form. (See also METALLURGY.)

Water Purification. The growing seriousness of the water supply problem has led to proposals to spend astronomical sums for diverting water from abundant rainfall areas to areas suffering from prolonged drought. However, until such schemes can become realities, there are two other possible methods of improving the situation. First, better use can be made of existing water supplies by treating industrial and municipal wastes, by using more completely biodegradable detergents, and by purifying river water more efficiently. Second, use can be made of brackish water unfit for domestic or industrial purposes, and salt and other minerals can be removed from seawater.

In 1965 the federal government increased its



SEA WATER will be converted into fresh water at the nuclear electric power and desalination plant to be built at Riverhead, N.Y. Incoming sea water is piped to main heating unit. The water receives heat from nuclear reactor. The heated sea water then enters an enclosed area where it is vaporized under reduced pressure. The vapor condenses on contact with the sea water intake pipe, yielding a supply of fresh water. Plant will make a million gallons of fresh water per day.

financing of saline water projects. Many methods of desalinization have been investigated, but only those involving the evaporation of heavily mineralized water and the condensation of the resulting vapor are seriously considered as a final solution. Of the four demonstration plants built by the Office of Saline Water of the Department of Interior, three, with a daily capacity of 1 million gallons each, are of the distillation type. Of these, one uses a falling film, 12-effect technique; another uses flash distillation in 36 stages; and the third employs forced-circulation vapor compression. The flash distillation plant has been moved to the U.S. Naval Base at Guantanamo, Cuba. The fourth demonstration plant, with a daily capacity of only 250,000 gallons, is based on a four-stage, electrodialysis process.

In Pennsylvania, a $10 million plant with a daily capacity of 5 million gallons is planned for reclaiming acid mine water at a projected cost of 30 cents per 1,000 gallons. It is estimated that tens of billions of gallons of polluted water are now impounded in mine pools. Treated water from this source may then be drained into rivers.

A study is being made of the feasibility of combining a nuclear power station with a water-desalting station. This plant would consist of a thermoelectric power station that derives energy from a nuclear reactor, with exhaust steam fed to a water-desalting unit. This low-temperature steam, normally wasted, would enable the desalting facility to operate without a boiler. The complete combined plant might have a relatively small production volume, but it would be economically feasible, in contrast with the multimillion dollar evaporation plants now in use. There are many places in the United States where the smaller plants would be useful.

A large pilot plant has been tested for an enormous multiple-effect evaporator plant in California. The final equipment, of 16 superimposed stages, is to be 230 feet high. In this scheme deaerated seawater is fed through tubes to the top of the tower, where a part of the water will be vaporized. As the remaining brine passes down, lower pressures permit more vapor to flash off and condense on the tubes bringing up the brine feed. At the bottom stage, concentrated brine is drawn off at one point and the final desalted product at another. Inert gases also are removed under reduced pressure. A coolant passes through the lower part of each stage. Three such evaporators are planned for a plant that would produce 150 million gallons daily.

A problem common to all seawater desalting plants is that of scales forming on heat transfer surfaces. This problem is being met by controlling hydrogen-ion concentrations, by using calcium sulfate anhydrite slurry, and by selectively precipitating scale on inert particles in a fluidized bed.

Brackish water containing up to 3,000 ppm (parts per million) of total dissolved solids is treated successfully by a combination of weakly basic ion-exchange resins and acidic ion-exchange resins. Carbon dioxide is retained in the process, and regenerators are ammonia and sulfuric acid. (See also WATER SUPPLY.)

Inorganic Chemicals. Hydrogen is separated from hydrogen-carrying gases by diffusing it through a hot palladium wall at pressures of 200 to 500 psi. In the mechanism of diffusion, the molecules of hydrogen dissociate in the metal on the high-pressure side into atoms which dissolve in the metal and then recombine as they leave the low-pressure side. The diffusion process supplies very pure hydrogen. The total capacity of plants depending on diffusion through palladium that are now in operation or under construction is about 34 million cubic feet per day. The process is also well adapted to laboratory-size units. However, the method is not expected to supplant either of the major processes for producing hydrogen—cryogenic (low-temperature) separation and differential adsorption. The projected plants will have more than 60% of the total capacity of planned ammonia plants of comparable size in the free world.

Since synthetic ammonia is the source of most nitrogen fertilizers, a new type of ammonia plant is expected to cause radical changes in the nitrogen fertilizer industry. The first of a series of such plants has a daily capacity of 600 tons of ammonia. Larger plants are in various stages of development.

The central role in the new type of plant is played by very large centrifugal compressors. Natural gas is the source of hydrogen, which is subjected to a high-pressure, catalytic steam-reforming process. Ammonia is synthesized at relatively low pressure. The plant is completely controlled by computers.

The so-called rare earths have varied, though limited, uses in chemical industries. Some of the more important uses are as ingredients in special types of glass, and as mixtures in glass polishes, arc carbons, and catalysts, and in alloys known as misch metal. Recently, an europium-activated yttrium vanadate proved to be a more efficient phosphor for color television sets than silver-activated zinc-cadmium sulfide. Instead of using dull green and blue phosphors to stay in balance with a dull red, the new phosphor, activated by europium, gives a sharper and brighter red. Only one europium atom is required for 19 yttrium atoms. However, increased sale of color television sets offers a profitable use for europium.

Synthetic potassium nitrate is being produced at a much lower cost than that derived as a by-product material from the Chilean nitrate fields. The synthetic process includes reactions involved in nitrogen, oxygen, and chlorine chemistry that must be carefully balanced and adjusted. Some intermediate products are so corrosive that parts of the equipment must be made of tantalum or lined with glass. The key to the new process is a dilute solution of nitric acid containing dissolved potassium nitrate that may be freed of water up to a concentration of 80% acid instead of the usual azeotrope of about 65%. The first step is the initial reaction between potassium chloride and dilute nitric acid. The mixture is fed into a column reactor. Dry chlorine and nitrogen dioxide are recovered from the top of the equipment, while the solution at the bottom is distilled and concentrated to 80% nitric acid content. Potassium nitrate is crystallized from the solution, dried, and marketed.

Organic Chemicals. Dimethyl sulfoxide (DMSO) is being extensively investigated as a medically active drug and as a carrier for other medical agents, but general acceptance in the pharmaceutical field is still in the future. Unfavorable newspaper publicity has prevented medical use of this compound until it has been tested more extensively. DMSO shows great promise as a carrier for pesticides, but its concentration must be limited to 1–2%. Solutions of 10% concentration have caused some burning of leaves. In the chemical industry, DMSO has proved to be a valuable solvent and reaction medium. It functions as a solvent for dyestuffs, and for such polymers as polyurethanes in coating fabrics. Acrylonitrile is polymerized in this solvent and is spun from it with superior strength. A French process employs dimethyl sulfoxide to extract aromatics from petroleum refinery streams. It is recovered by a countercurrent stream of paraffins that strips the aromatics from the solvent.

The common antiknock additives for gasoline, tetraethyl lead and tetramethyl lead, are being made by an electrolytic process that appears to have the advantages of higher yields and of avoiding recovery of large quantities of byproduct lead. Instead of reacting the alkyl halides, ethyl and methyl chlorides, with an alloy of sodium and lead, Grignard reagents, which may be represented by the general formula RMgCl, are made by reacting the chlorides with magnesium. This material is soluble in a mixture of ethers that conducts the electric current. The metallic cell walls act as cathodes, and lead pellets constitute the anodes, with the two electrodes being separated by a diaphragm. The liberated magnesium is allowed to react with additional alkyl halide instead of bridging the gap between electrodes, as would occur in a conventional cell with plate or rod electrodes. To obtain a mixture of the two antiknock compounds, a Grignard reagent is made with one, and the other alkyl halide is added to the cell. The magnesium chloride remaining is used in magnesium cells.

The great extent to which the American public is dieting is vividly indicated by the increase in the production of cyclamate sweeteners. A new plant producing 4 million pounds annually increased the total output of cyclamate sweeteners to about 25 million pounds in 1965. This is equivalent to the sweetening power of 900 million pounds of sugar.

The problem of piece-dyeing polypropylene fabrics has been solved to a limited extent by using organonickel compound dyes. The molecules of such dyes must contain phenol, alcohol, and amino groups that form stable complexes with nickel. There are about 70 dyes which may be used in connection with polypropylene fibers.

Synthetic Resins and Plastics. The first plastic made by polymerization employing an oxidative coupling reaction by using gaseous oxygen is known as polypropylene oxide. The starting substance is 2.2-dimethyl phenol, made by methylating phenol, because xylene extracted from coal tar is limited in amount. Oxygen, solvents, and a copper-amine catalyst are used in the polymerization process. The product is a high-strength thermoplastic which retains its toughness at both low and high temperatures. It is competitive with metals, thermosetting plastics, and engineering-quality thermoplastics.

New polysulfone plastics are in commercial use, and a plant producing 10 million pounds per year was constructed in 1965. Heat deflection temperature of the plastic is 345°F, and the plastic may be used for long periods in the temperature range between −150°F and 300°F. In thicknesses greater than 0.075 inch, this material does not support combustion and is rated as self-extinguishing. Its dimensional stability under tension is evidenced by low creep values both at room temperatures and at the boiling point of water. Electrical properties are maintained up to the limits of use, even with high humidity and after immersion in water. Immediate uses for the material are extruded pipe and sheets that are both tough and corrosion resistant.

To produce this polysulfone plastic, diphenols such as bisphenol-A are dissolved in a mixture of benzene and dimethyl sulfoxide and are reacted with potassium hydroxide. Water is removed along with benzene, leaving the potassium salt in solution. More solvent is added as a reactant along with 4.4-dichlorophenyl sulfone, and the mixture is heated for several hours. Polymerization takes place with formation of the polysulfone. The unit of the polymer is made up of four benzene rings linked by three atoms—carbon, oxygen, and sulfur. On the linking carbon atom are two methyl (CH_3) groups, and on the sulfur atom there are two oxygen atoms.

The advantage of the smooth and slippery surface of the synthetic, Teflon, far outweighs its relatively low heat conductivity in the construction of heat-exchange equipment. Teflon is replacing the common metals, which are more subject to fouling and corrosion. Instead of metal tubes of 4- to 5-inch diameters, manufacturers are using a much larger number of thin-walled Teflon tubes, whose diameters range from 0.1 to 0.25 inch. The plastic tubes require about one fourth of the space occupied by metal heat exchangers, and have equivalent heat-transfer capacity. They readily withstand pressures of 225 psi gauge at 70°F and 50 psi gauge at 300°F. Such materials as sulfuric and nitric acids, hydrocarbons, flue gases, and other corrosive materials that usually require conductors made of titanium, stainless steels, and other high-priced materials are now conducted through Teflon heat-exchangers.

Petroleum and Natural Gas. Petroleum refinery units, known as "cat crackers," that use fluidized beds of catalyst have set remarkable records of continuous operation. At a refinery in Louisiana, one of these colossal units operated for 1,399 consecutive days, and another operated for 1,467 days without a single interruption. The latter unit processed 116.3 million barrels of petroleum, supplying petrochemicals, heating oils, and gasoline. Another 256-foot-high cracker in Texas was completed during World War II and is the second of the type in the world. It processed a record 340 million barrels of oil.

Instead of separating helium from natural gas at extremely low or cryogenic temperatures, this element may be differentially absorbed by an infinitely large number of tiny hollow glass spheres, 0.002 inch in diameter, such as those used to protect liquids in large open storage tanks. Gas containing helium is brought into contact with the spheres at a temperature of 250°F and at a pressure of 2,000 psi. The helium diffuses through the very thin glass walls until the pressure inside and outside is equalized. The pressure is then relieved, the gases are removed, the spheres are reheated, and helium is diffused and collected.

Roads covered with petroleum, asphalt, and coal tar are being surfaced additionally with a thin coat containing emulsions of synthetic rubber polymers. The additive employed with petroleum asphalt is a butadiene-styrene copolymer, while the coal tar pitch is surfaced with an emulsion of butadiene-acrylonitrile derivatives. Several thousand miles of these rubberized roads were in use in 1965, as well as many similarly resurfaced airfields, city streets, and parking lots. Natural rubber may be used, but synthetic elastomers are preferred because they can be tailored as required to improve the properties of asphalt and pitch.

For chemical application in medicine, see BIOCHEMISTRY and MEDICINE; and for recognitions of notable achievements in chemistry, see NOBEL PRIZES and PRIZES AND AWARDS.

W.T. READ
Consulting Chemist

CHESS. See SPORTS.

PROTESTING SEGREGATION in Chicago's public schools, civil rights demonstrators stage a march along Balboa Drive to the City Hall, June 10, 1965.

CHICAGO

In Chicago, the second most populous city in the United States (1965 est. city pop., 3,520,000; 1960 metropolitan area pop., 6,220,913), a controversy over de facto school segregation led to a congressional investigation and a temporary withholding of $30 million in federal aid to the city's schools.

School Controversy. Demands for the immediate resignation of Superintendent of Schools Benjamin C. Willis and protests over de facto segregation brought continuing demonstrations by the Co-Ordinating Council of Community Organizations during the summer. Martin Luther King visited Chicago on July 24–27 and led a march of 10,000 persons to City Hall.

In July, Superintendent Willis, local civil rights leaders, and other individuals testified in Washington before the U.S. House Committee on Education and Labor about Chicago's school integration. A major crisis occurred when Willis was notified on September 30 by U.S. Commissioner of Education Francis Keppel that the possible noncompliance of Chicago schools with the 1964 Civil Rights Act required that $30 million in aid to Chicago schools be temporarily withheld—the first such action taken by the federal government in a Northern city. After much public outcry, a private meeting between Chicago's school board president, Frank M. Whiston, and the U.S. undersecretary of health, education, and welfare, Wilbur J. Cohen, resulted in the release of the federal funds.

Racial Violence. Racial violence broke out on the West Side in August. On Thursday night, August 12, an undermanned hook-and-ladder truck sped from a fire station, jumped a curb, and caused the death of a 23-year-old Negro woman, Dessie Mae Williams. Angry Negroes quickly gathered outside the predominantly white firehouse and the violence began. The riot grew, continued into the early morning, and resumed the next evening. By the time calm was restored, 170 persons had been arrested and 85 injured.

Government. Democratic candidates were successful in their bid to fill City Council vacancies in the "nonpartisan" aldermanic elections of May 18. The party lineup of the new 50-member council was: 41 Democrats, 6 Republicans, 2 independents, and 1 remaining vacancy.

For the first time, the Illinois General Assembly passed legislation granting a state subsidy to the Chicago Transit Authority. Mayor Richard J. Daley's tax proposals, however, were defeated by the Republican-dominated state Senate.

In August the Committee for Urban Progress, a citizens group, presented its proposals for the creation of a metropolitan form of government for the Chicago area. The two-year study indicated that the merger of the Chicago and Cook County governments would take ten years to accomplish.

Chicago Circle Campus. The $50 million Chicago Circle campus of the University of Illinois opened its doors in February, and by September it had an enrollment of 8,200 students. Enrollments are expected to reach 14,000 by 1967 and 20,000 by 1969, and the second phase of construction plans has begun.

New Archbishop. Chicago mourned the death on April 9 of Albert Cardinal Meyer, head of the Chicago diocese of the Roman Catholic Church. In the late summer his successor, Archbishop John Patrick Cody, was warmly welcomed to Chicago from his former post as archbishop of New Orleans.

HUAC Hearings. On May 25–27 the U.S. House Un-American Activities Committee held hearings in Chicago on organizational changes in the Communist party. Efforts on the part of two subpoenaed witnesses to obtain a court injunction against the hearings failed. During the proceedings, crowds of over 200 persons protested the committee's activities, and 71 demonstrators were arrested.

Economy. The consumer price index for the Chicago area was 107.7 in July 1965 (1957–59 = 100). During the first 8 months of 1965, investment in industrial plants was valued at $492,075,000, and steel production amounted to 17,033,000 tons. In the same period 11,918 building permits were issued. Unemployment in Chicago averaged 101,200 during the first 8 months of 1965, and the number of persons employed averaged 3,088,900.

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UPI

CHILD WELFARE AGENCIES ease the plight of orphans throughout the world. Here, South Korean children are about to receive gift parcels from abroad.

CHILD WELFARE

This article reviews social and economic developments affecting children and youth, under two headings: (1) U.S. Programs; and (2) International Programs. (For information about juvenile delinquency, see CRIME; for medical information on children's diseases, see PEDIATRICS.)

U.S. PROGRAMS

Child welfare programs in the United States in 1965 were planned to combat four basic evils: denial of civil rights, poverty, ignorance, and poor health. The Children's Bureau of the Department of Health, Education, and Welfare is the chief federal agency dealing with child welfare problems, particularly through its Social Sciences and Health Services divisions. Its work and that of other child welfare agencies has been aided by recent federal legislation providing new methods for overcoming the economic and social deprivations of children. Both the Economic Opportunity Act of 1964, which established the Office of Economic Opportunity to administer anti-poverty activities, and the Civil Rights Act of 1964, which was implemented by regulations of the Department of Health, Education, and Welfare, gave child welfare agencies new weapons to use in their efforts to provide equal services and opportunities for all children.

Expansion of Services. Under the impact of this recent legislation, the range of activities included in child welfare service has been broadened considerably. However, reports from states and regions in 1964 and 1965 indicated that many problems remain to be solved. Confusion and overlapping of services have resulted from the development of existing programs and the initiation of new ones. Many difficulties have arisen from inadequate state legislation, the lack of professionally trained personnel, and the ferment arising from the Civil Rights Act with regard to the racial integration of public schools and other facilities.

State Legislation. All states and territories reported in their 1964 welfare plans that their legal base was adequate for extending public child welfare services to all political subdivisions, for expanding the range of services, and for improving the quality of services provided. But they also registered certain reservations, chiefly that legislation was permissive rather than mandatory, that there was no correlation between the scope and extent of services authorized and the funds allotted for them, and that certain specific enactments were necessary before services could be considered as authorized.

However, a rough assessment in 1965 by the Division of Social Services of the Children's Bureau found that only 12 of the 54 states and territories had adequate legislation, that 30 had fairly adequate laws, and that 12 had inadequate statutes. The bureau reported that some states need a basic children's welfare act, and that others need legislative revision to broaden the concept of child welfare, expand the range of services, or provide for licensing of social workers. Most states need legislation to require the provision of services and to provide funds for them.

Personnel. One of the serious problems facing

UPDEGRAFF FOR UNICEF

MATERNAL AND CHILD CARE patients await medical attention at a UNICEF-sponsored health center in Tunisia.

child welfare services is the shortage of professionally trained workers. It is estimated that 21,000 full-time workers will be needed by 1970. Positions must be classified, licensing must be standardized, and working conditions will have to be satisfactorily maintained. In 1965, three bureaus of the Welfare Administration—the Bureau of Family Services, the Children's Bureau, and the Office of Aging—held meetings to discuss these problems in five geographic areas. Two workshops for state and local staff development, held in Washington, D.C., reported their findings on the characteristics of staff development provisions.

The child welfare training program had $3,579,455 in federal funds available for the fiscal year 1965–66, of which $3,578,589 was actually granted. Allocations were made to schools of social work and other institutions of higher learning to provide for teaching grants, traineeships, and/or short-term training grants for qualified students.

Day-Care Programs. The Division of Social Services cooperates closely with the Office of Economic Opportunity on the problems of day-care service. A disturbing factor is the rapid increase in the number of working mothers. A preliminary report issued in 1965 by the Children's Bureau and the Department of Labor's Women's Bureau estimated that there were 9.5 million working mothers, or double the number in 1950. The report forecast a 43% rise in the number of working mothers with preschool-age children by the 1970's. It also reported that the number of children under 14 with working mothers totaled 12,291,000, of whom 1,229,100 were in family or group day-care programs.

Fifty of the states and territories had approved day-care services in 1965, as against 46 in 1964. Although the available allotment for these services was the same in both years, fiscal reports from the states indicate a substantial increase in expenditure on their part. A 1965 federal appropriation act requires that the states match federal day-care funds on a 50% basis.

On May 15 a conference attended by more than 1,000 persons to discuss day-care problems was held in Washington, D.C. It was sponsored by the National Committee for the Day Care of Children, the Child Welfare League of America, and the Children's Bureau.

Education. The Elementary and Secondary Education Act of 1965 furnished great impetus to educational programs by providing special financial assistance to schools with large numbers of low-income students. (See EDUCATION.)

Anti-Poverty Programs. The Office of Economic Opportunity has established highly successful programs to combat poverty. The Job Corps was designed to remove youngsters from both city and rural slum environments and give them useful employment in corps centers, while at the same time providing them with basic education. The Neighborhood Youth Corps provided work training and work study programs in the youngsters' home towns. (See ANTI-POVERTY PROGRAM.)

Foster Family Care. Foster family care was the subject of special consideration in 1965, especially in urban districts where fewer families take in children and care for them each year. Although such programs have been difficult to finance, the Children's Bureau reported that 23 states had 4,861 children from 2,614 families in foster homes (excepting 263 in institutions) in March 1965, whereas only 12 states had 1,120 children from 466 families in foster homes in March 1962. Largely as a result of the difficulty in finding foster homes, agency-operated group homes have increased in number.

Mentally Retarded Children. It is estimated

SYBIL SHELTON FROM MONKMEYER

PROJECT HEAD START opens new vistas of learning for preschool children from the underprivileged neighborhoods in American cities. The children share play and work activities under the guidance of skilled teaching personnel.

that 34,000 mentally retarded children now receive services from public welfare agencies, and more than 5,500 from voluntary agencies.

(Information in this article was supplied by the Children's Bureau, U.S. Department of Health, Education, and Welfare.)

INTERNATIONAL PROBLEMS

The United Nations Children's Fund (UNICEF) was created to coordinate programs providing for the health and welfare of children throughout the world, and to aid in financing these programs. The 1965 Nobel Prize for peace was bestowed upon it in recognition of its work. Henry R. Labouisse, executive director of UNICEF, formally accepted the award on December 10. (See NOBEL PRIZES.)

UNICEF works in collaboration with other United Nations agencies, forming joint committees with them—in health, with the World Health Organization (WHO); in education, with the United Nations Educational, Scientific and Cultural Organization (UNESCO); and in nutrition, with the Food and Agricultural Organization (FAO).

UNICEF held its annual meeting at United Nations headquarters in June 1965 to make plans for 1965–66. It was reported that contributions from the member countries must be increased because the child population of the countries assisted by UNICEF is increasing at the rate of 2.5% annually. The UNICEF European National Committees, at their annual meeting in May at Montreux, Switzerland, reported that if the contributions of developed European countries were reckoned in terms of their gross national products they would have to be doubled to compare favorably with those of developing countries. The United States repeated its offer to increase its annual contribution if the total of contributions from other countries was increased substantially.

In 1962, UNICEF had made allocations totaling $44 million, and expected to be able to increase this amount annually. Instead, available funds tapered off. Expenditures in 1965 fell 15% below those in 1962. Expenditures for 1966, totaling $36,411,285 in approved commitments, were estimated at 10% below those of 1962. The Executive Committee approved allocations of $33,708,385 for 1966, of which 62.72% is for health services, 17.22% for education, and 11.4% for nutrition.

UNICEF decided to give special attention during 1965–66 to the needs of children between the ages of one and six years. In many developing countries the mortality rate for children in this group is 40% to 50% higher than in developed countries. Even in those countries where health and economic needs of children generally are well taken care of, social and emotional problems persist for them.

The possible future role of UNICEF aid for family planning came under consideration. It was pointed out that not only was too little definitely known about the biology of human reproduction, but that each country first had to decide its own policy in regard to family planning.

(Information for this article was supplied by the United Nations Children's Fund.)

CHILDREN'S BUREAU. See CHILD WELFARE—*United States Programs.*

CHILDREN'S FUND, United Nations. See CHILD WELFARE—*International Programs.*

MAIA WOJCIECHOWSKA
shadow of a BULL

ATHENEUM

MAIA WOJCIECHOWSKA won the American Library Association's 1965 John Newbery Medal for *Shadow of a Bull*—a story for teenagers about a boy who grows up in the shadow of his deceased father, a matador.

CHILDREN'S LITERATURE

Individual volumes of excellence among children's books in 1965 easily stood out from the year's generally mediocre production. The most encouraging overall trend was a willingness on the part of authors to deal realistically with contemporary social problems.

A slight drop from the previous year was recorded in the number of titles published. Preliminary figures calculated by *Publishers' Weekly,* trade journal of the book publishing industry, placed the number of books at over 2,500. Paperback publishing in the children's field continued to expand, with several publishers making their first appearance in this area. In addition, there was a discernible improvement in quality.

Awards. Several important honors were bestowed in 1965 for children's books published the previous year. The American Library Association's John Newbery Medal for the most distinguished contribution to children's literature went to Maia Wojciechowska for *Shadow of a Bull.* The association's Randolph Caldecott Medal for the most distinguished American picture book for children was given to Beni Montresor for his illustrations in *May I Bring a Friend?* Ruth Harnden received the Child Study Association's award for *The High Pastures,* as the best book dealing with problems confronting young people today.

Subjects. The year saw the usual countless volumes of mysteries and sports, as well as books of fiction and fact devoted to horses and riding. It was a good year for pirates, with a dozen volumes given to their exploits, and for Leonardo da Vinci, whose life and work was saluted in several handsome volumes. The use of Negroes in illustrations and as characters in stories continued to increase, and there were more books of fiction and history dealing with racial integration.

Fiction. The literary event of 1965 in children's book publishing was the publication of *The Animal Family,* written by poet and critic Randall Jarrell. Received with general acclaim by the critics, this timeless, deceptively simple story about a hunter, a mermaid, a lynx kitten, a bear cub, and an orphan boy was hailed by P.L. Travers in the New York *Times* as "not so much a book as a kind of visitation . . . a paean to family life." Jarrell was tragically killed in an accident shortly before publication of the book.

The year also saw the passing of two other famous authors: Thornton W. Burgess, one of the grand old men of children's books (he created the Peter Rabbit Briar Patch series), and the equally prolific British author, Eleanor Farjeon. (See NECROLOGY.)

Among picture books, the most noteworthy volumes for ages four to seven were: *Oasis of the Stars*, written by Olga Economakis and illustrated by Blair Lent—a lyrical account of a young nomad's search for water; *Salt*, a Russian folktale adapted by Harve Zemach and illustrated by Margot Zemach—a prize-winning book in the New York *Herald Tribune's* Spring Book Festival; *Tom Tit Tot*, an English folktale illustrated by Evaline Ness; Alvin Tresselt's *Hide and Seek Fog*, with impressionistic illustrations of mist-shrouded Cape Cod done by Roger Duvoisin; and *Aesop's Fables*, selected and adapted by Louis Untermeyer, and illustrated by Alice and Martin Provensen.

Some outstanding books were published for children in the age group eight to twelve. The most notable were: *Drop Dead*, by Julia Cunningham—a tale with a touch of Gothic and about an orphan boy serving an isolated apprenticeship to a cruel ladder-maker; *The Empty Schoolhouse*, by Natalie Savage Carlson—a story set in Louisiana and telling how the friendship of two girls, one white and one Negro, is tested under the stress of integration; Jack Sendak's *The Second Witch*, a comic yet tragic fantasy with a prankish witch and a sensitive bear; and Rebecca Caudill's *A Certain Small Shepherd*, a poignant Christmas story.

Among the novels for young persons over twelve, the best volume was James Forman's *Ring the Judas Bell*, a story of a shepherd boy and his sister caught in the anguish and turmoil of the Greek civil war in the late 1940's. Other distinguished fiction for this age group included Harold Keith's *Komantcia*, an unflinchingly grim account of captivity among the Comanche Indians; Nat Hentoff's *Jazz Country*, which tells of a young man's efforts to break into the world of professional jazz musicians; Elizabeth Borton de Trevino's *I, Juan de Pareja*, a delicately restrained fictionalized biography of the Negro who served the 17th-century painter Velázquez; and Rosemary Sutcliff's *The Mark of the Horse Lord*, a historical novel set in 2nd century Roman Britain.

Biography. The most meritorious biographies for teenagers were Leo Gurko's *The Two Lives of Joseph Conrad*, Burke Wilkinson's narrative account of France's Henry IV in *The Helmet of Navarre*, Polly Longsworth's *Emily Dickinson*, and Aylesa Forsee's *Pablo Casals*. For the same age, in the field of history, three books stood out: *Trail Drive*, Andy Adams' classic narrative about cowboy life, edited for young readers by Glen Rounds; *The Wreck of the Whaleship Essex*, Owen Chase's 1821 account of a 90-day ordeal in a whaleboat, edited by Iola Haverstick and Betty Shepard; and Betty Schechter's *The Dreyfus Affair*.

Poetry. There were several distinguished anthologies of poetry for readers in their early teens: Lillian Morrison's *Sprints and Distances;* Louise Bogan and William Jay Smith's *The Golden Journey;* and Charles Causley's *Modern Ballads and Story Poems*. For children aged six to ten, Conrad Aiken produced a volume of 16 original poems, *Cats and Bats and Things With Wings*, superbly illustrated by Milton Glaser.

GEORGE A. WOODS
Editor, Children's Books
The New York Times

CHILE

S. AMERICA
AFRICA

President Eduardo Frei Montalva sought to implement a sweeping reform program in the early part of 1965, but met determined opposition in the national congress. The president's Christian Democratic party received strong support in an election in March, and the outlook for passage of key legislation brightened. The president's prestige was enhanced by his three-week trip to western Europe in July. However, economic difficulties continued to plague Chile during the year.

The Reform Program. At his inauguration in November 1964, President Frei outlined an ambitious program of social and economic reforms, which he described as a "revolution within liberty and law." His program called for the government to share in the ownership of large copper mining companies, and for land redistribution, taxes on concentrated wealth, and the reduction of inflationary pressure. Left-wing members of the congress rejected the administration's proposals as too mild, and members of center and conservative parties found them too revolutionary, so Frei was unable to proceed. Frei asked for power to legislate by decree, but congress refused to grant him that power.

Seeking to "Chileanize" foreign-owned industry, the administration reached an agreement late in 1964 with the three principal copper companies (United States private corporations) operating in Chile. The agreement provided for joint ownership by the companies and the Chilean government, for limits on taxation, and for expansion plans that would double copper production by 1970. Agreements were announced also for the joint ownership of the Chilean Telephone Company, a subsidiary of the International Telephone and Telegraph Company, and for the purchase of the Chilean Electrical Company from the American and Foreign Power Company. However, execution of the agreements was blocked in Congress, which also refused to pass the administration's proposed capital levy on personal wealth.

Elections. The congressional election on March 7, 1965, provided evidence of massive popular support for Frei's program. The Christian Democratic party won 82 of the 147 seats in the Chamber of Deputies; this was the first time since 1841 that a single party had received an absolute majority in the lower house. The Christian Democrats also obtained 13 of 45 seats in the Senate, for a gain of 9.

The new congress, which convened in May, by November 4 had passed the administration's copper bill. Despite objections by 17,000 copper miners, who conducted a 35-day strike to obtain additional benefits, President Frei vetoed numerous amendments to the new law.

Foreign Affairs. A state visit to Europe by President Frei in July dramatized his intention of giving Chile a prominent and independent role in international affairs. Frei met with heads of state of Italy, France, Britain, and West Germany, with Pope Paul VI, and, en route, with the presidents of Argentina, Uruguay, Brazil, Venezuela, and Peru. He emphasized Chile's independence of the United States by issuing a joint statement with President de Gaulle of France that implied criticism of American military intervention in the Dominican Republic. On his return, however, Frei welcomed the assistance of both the United States and European countries in the development of Latin America.

During a tour of South America in November, Senator Robert F. Kennedy of New York conferred with President Frei. He met a hostile reception by leftist elements among university students.

Disasters. An earthquake in central Chile on March 28 lasted only 90 seconds, but caused severe damage. More than 400 people lost their lives, and 250,000 people were left homeless. The village of El Cobre, a mining community 100 miles north of Santiago, was completely wiped out when a nearby dam broke as a result of the quake.

CHILE · Information Highlights

Area: 292,256 square miles.
Population: 8,492,000 (June 30, 1964 est.).
Chief Cities (1964 est.): Santiago, the capital (Greater Santiago, 2,184,149); Valparaíso, 273,158; Concepción, 170,034; Viña del Mar, 131,479.
Government: *President*—Eduardo Frei Montalva (inaugurated Nov. 3, 1964). *Congress*—Chamber of Deputies, 147 members (party seating, 1965: Christian Democrats, 82; Radicals, 20; Communists, 18; Socialists, 15; Liberals, 6; others, 6); Senate, 45 members (party seating, 1965: Christian Democrats, 13; Radicals, 9; Socialists, 7; Communists, 6; Liberals, 5; others, 6).
Religious Faiths: Roman Catholics, 88% of population; Protestants, 7%.
Education: *Literacy rate* (1960)—84% of population aged 15 and over. *Total school enrollment* (1962)—1,557,777 (primary, 1,245,973; secondary, 178,008; teacher-training, 9,297; technical 97,315; higher, 27,184).
Finance (1964 est.): *Revenues*, $755,000,000; *expenditures*, $948,000,000; *public debt*, $882,000,000; *monetary unit*, escudo (2.70 escudos equal U.S.$1).
Gross National Product (1964): $605,000,000.
National Income (1964): $530,000,000; average annual income per person, $62.
Economic Indexes (1964): *Manufacturing production*, 146 (1958=100) *agricultural production*, 124 (1955–57=100); *cost of living*, 400 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,266,000; crude steel, 545,000; gasoline (1963), 713,000; lumber (1963), 785,000 cubic meters; meat (1961), 199,000; sugar, 108,000; wheat flour (1963), 659,000.
Crops (metric tons, 1964–65 crop year): Wheat (1963–64), 1,304,000; potatoes, 798,000; sugar beets, 706,000; maize, 152,000; barley (1963–64), 136,000; oats (1963–64), 133,000; dry beans, 100,000.
Minerals (metric tons, 1964): Iron ore, 9,852,000 (ranks 13th among world producers); copper, 630,434 (world rank, 4th); natural gas (1963), 192,401,000,000 cubic feet (world rank, 8th); silver (1963), 2,390,120 troy ounces (world rank, 15th); gypsum, 130,000; manganese, 20,366; molybdenum, 3,896.
Foreign Trade (1964): *Exports*, $623,000,000 (chief exports, 1963: copper ingots, $347,000,000; iron ore, $57,000,000; saltpeter, $30,000,000); *imports*, $609,000,000 (chief imports, 1963: raw cotton and lint, $31,000,000; electrical machinery and apparatus, $29,000,000; cereals, $28,000,000). *Chief trading partners* (1963): U.S. (took 34% of exports, supplied 35% of imports); West Germany (took 11% of exports, supplied 12% of imports); Great Britain (took 14% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 36,425 miles (2,074 paved); *motor vehicles* (1964), 146,500 (automobiles, 66,000); *railways* (1963), 4,857 miles; *merchant vessels* (1964), 48 (251,000 gross registered tons); *state airline*, Linea Aerea Nacional de Chile (LAN); *principal airport*—Santiago.
Communications: *Telephones* (1964): 235,046; *television stations* (1964), 3; *television sets* (1964), 50,000; *radios* (1962), 1,500,000; *newspapers* (1962), 44.

LONDON DAILY EXPRESS

CHILE'S PRESIDENT FREI sadly views bodies of copper miners buried by disastrous earthquake of March 28, 1965.

EDUARDO FREI MONTALVA, who was elected president of Chile in September 1964, received a strong mandate for his reform program in March 1965, when voters gave his Christian Democratic party a clear majority in the Chamber of Deputies. Hampered by a hostile "lame duck" Congress during the early months of his six-year presidential term, Frei had campaigned for a "parliament for the president." The election results improved chances for implementing his "profound revolution within liberty and law."

Frei was born in Santiago, Chile, on Jan. 16, 1911. While a law student at the Catholic University of Chile (1928–33), he became familiar with the social and political theories of Roman Catholic philosophers. In 1938 he left the Conservative party to help organize the National Falange, a party dedicated to Christian principles that became the nucleus of the new Christian Democratic party in 1957. Frei was minister of public works from 1945 to 1949, and a member of the Senate from 1949 to 1964.

The earthquake followed a drought that had caused food shortages in Coquimbo and Atacama provinces. Later in the year, winter storms assaulted the same region. Resulting floods caused 96 deaths, left 70,000 homeless, and strained the economy.

Economy. Economic conditions showed little improvement in 1965. Although Chile had experienced a 4% increase in real income in 1964, growth was slower in 1965. The cost of living, which had increased 38% in 1964, rose another 21% by October 1965. The government tried to limit wage increases to no more than the rise in the cost of living, but settlements were higher in the copper industry.

The balance of trade, which had shown a surplus of $14 million in 1964, as compared with an adverse balance of $97 million in 1963, continued to benefit in 1965 from favorable prices for copper and the curtailment of imports. In August, however, cattle purchases were slowed, and Chileans had to go without beef two days a week to reduce imports.

Chile's foreign debts totaled more than $1.7 billion by the end of 1964, and their amortization in 1965 would have required half of Chile's export earnings. However, payments were reduced substantially by renegotiation. The United States government made available about $110 million in loans.

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CHINA

CHINA

CHINESE COMMUNIST LEADERS Liu Shao-chi and Mao Tse-tung (2nd and 3rd from left) are shown at an anti-American rally in Peking, February 10.

China, the most populous country in the world, continues to be divided into two political entities: Communist China (the People's Republic of China), situated on the mainland; and Nationalist China (the Republic of China), located on the island of Taiwan.

COMMUNIST CHINA

Communist China continued to support the Vietcong guerrillas in Vietnam in 1965, and on several occasions threatened to intervene if the United States attacked North Vietnam. The Vietnam crisis, however, did not bring Communist China and the Soviet Union together as some had expected. During the Indian-Pakistani conflict in September, Peking's ultimatum to India to withdraw from the Sikkim frontier was ignored by New Delhi, but this crisis, too, did not lead to the war. The Peking-Djakarta axis suffered a serious, if not irreparable, rupture during 1965 when the Indonesian army smashed an abortive leftist coup in September and launched a campaign against the Communists.

On the home front, Peking exploded its second nuclear device on May 14, but made little effort to celebrate the occasion. In general, life in Communist China became better in 1965 after good harvests were gathered in the Yangtze Valley and in South China. Peking tightened ideological controls by cracking down on alleged revisionist tendencies among functionaries and intellectuals.

Vietnam. Peking reacted precipitately against United States retaliatory air attacks on North Vietnam in February 1965. It branded the United States action as "undisguised war provocation" and warned that the Chinese people would "definitely not stand by." On February 13 the Chinese Communists declared that aggression against North Vietnam meant aggression against China and that there could be no peace in Southeast Asia so long as U.S. military forces remained there. After President Johnson stated on April 7 that the United States was ready for unconditional discussion to end the war in Vietnam, both Peking and Hanoi rejected the offer as a "hoax."

But in spite of its militant statements, Communist China avoided direct involvement in the war in Vietnam. It increased its shipment of military equipment and war materials to North Vietnam, but not the size of its personnel. Peking's basic policy was revealed by Ch'en Yi, the foreign minister, when he declared that Communist China would intervene if U.S. forces crossed the 17th parallel or if the existence of the North Vietnamese government was threatened. He undoubtedly meant crossing by ground forces, for subsequent U.S. air strikes against North Vietnam did not lead to Peking's armed intervention. The United States position that there would be no territorial sanctuary for Communist China if it became directly involved in the war, and the possibility that the United States might take advantage of the war to destroy China's nuclear installations, were two weighty factors that undoubtedly deterred the Peking government from taking rash actions.

EASTFOTO

Military Strategy. Because of its vulnerability to aerial attacks, Peking saw the advantage of fighting the war by proxy. Its immediate objective was to have the Vietcong mire U.S. forces in South Vietnam. Its long-range strategy was to encircle the West by inciting similar revolutionary wars in other underdeveloped countries. In an article published on September 3 in *Jen Min Jih Pao,* the official Chinese Communist newspaper, Marshal Lin Piao, the minister of defense, envisaged "people's wars" in Asia, Africa, and Latin America, which would defeat the "American colossus piece by piece." The idea was derived from Mao Tse-tung's military strategy of establishing revolutionary bases in rural areas so that the urban centers would be outflanked and conquered. In international terms, North America and western Europe are analogous to the cities, and Asia, Africa, and Latin America are analogous to the rural areas.

Ultimatum to India. The border war in 1962 between Communist China and India strained relations between the two countries, with Peking maintaining close ties with Pakistan, India's perennial antagonist, and with India looking to both the Soviet Union and the United States for increased aid. Many times in 1965, Peking and new Delhi accused each other of border intrusions.

When armed conflict between India and Pakistan along the Kashmir truce line erupted into war in September, Peking sided with Pakistan. On September 7, Communist China declared that India's military thrust into Pakistan represented "naked aggression" that threatened the peace of Asia. On the following day, Peking delivered a note to the Indian government protesting against "military aggression and provocation" along the border between Tibet and Sikkim, an Indian protectorate. As the world watched with anxiety, an ultimatum was handed to the Indian envoy in Peking on September 16, demanding that India withdraw its troops and dismantle its fortifications along the Sikkim-Tibet border in three days, or face "grave consequences." On September 19, Peking extended the deadline by three days.

In the meantime, Communist Chinese troops reportedly began to fire across the border in two sections—the Sikkim area in the east and the Ladakh region in the west. Then, on September 21, as suddenly as it had issued the ultimatum, Peking announced that India had dismantled its military installations along the Sikkim border, as China had demanded. China also surreptitiously withdrew its troops from positions near the Sikkim border.

Relations with the Soviet Union. When the United States first launched retaliatory air strikes against North Vietnam, the Soviet Union made a strong appeal for unity in the Communist world. It soon became apparent, however, that the ideological and policy differences between Moscow and Peking were too deeply rooted to be resolved on the basis of a temporary need for cooperation. An inauspicious event in relations between the two countries occurred on March 4, when a Chinese-led demonstration by Asian students in Moscow to protest U.S. air attacks on North Vietnam was forcibly quelled by Soviet police and troops. Peking immediately protested, charging the Russians with "police brutality" and demanding that the Soviet government apologize to the students and punish the police officials involved. Moscow rejected the demands.

Subsequently, Peking accused Moscow of following "a line of compromise and capitulation that encouraged the imperialist forces of aggression." The parallel action taken by the Soviet Union and the United States in helping to formulate a cease-fire under the auspices of the United Nations in regard to the Indian-Pakistani war was cited as evidence of Moscow's betrayal of the Communist cause by working "hand-in-glove with U.S. imperialism."

The Asian-African Conference. To limit Soviet influence in Asia and Africa, Communist China stubbornly opposed the participation of the Soviet Union in an Asian-African conference, originally scheduled to open in Algiers on June 29. Peking insisted that the Soviet Union, with two thirds of its population in Europe, was not an Asian country. Premier Chou En-lai went to Algiers in March to seek Algerian backing for the exclusion of the Soviet Union from the conference, but failed to obtain the necessary support. When Algerian President Ahmed Ben Bella, who was friendly to the Soviet Union, was overthrown by a coup on June 19, Peking immediately recognized the new regime headed by Col. Houari Boumedienne.

Although both Chou En-lai and President Nasser of the United Arab Republic urged that the conference open on schedule, it was postponed until November 5, to the disappointment and frustration of Peking. Later, when it became apparent that Peking was not able to prevent conference sponsors from issuing an invitation to Moscow, Peking decided to boycott the conference. As a result, the conference was postponed indefinitely.

SOVFOTO

MAO TSE-TUNG, the 72-year-old chairman of the Chinese Communist party (*above*, with Soviet Premier Kosygin), remained the number one man in China in 1965. He was hailed by other Chinese leaders for his contributions to the theory and tactics of armed revolutionary struggle. Countries in Asia, Africa, and Latin America were urged to adopt his theory of revolutionary war as the basic strategy of achieving world communism. Mao appeared in photographs to be in good health despite contrary reports.

Mao was born in 1893 in Shao Shan, Hunan province, China. He joined Sun Yat-sen's Revolutionary Army in 1911, and 10 years later helped to found the Chinese Communist party. In 1931, Mao was elected chairman of the first All-China Congress of Soviets. After the Communist victory over the Nationalists in 1949, he became chairman of the People's Republic of China. He resigned this office in April 1959, but retained the powerful position of chairman of the Communist party Politburo.

UPI

CHOU EN-LAI, the 67-year-old premier of Communist China, is his country's chief spokesman to the outside world. In 1965 he visited many African and Asian countries (*above*, he is with Sukarno in Indonesia). In each country he repeated his attacks on U.S. actions in Latin America, Vietnam, and the Congo, and proposed the creation of a new United Nations that would be free of the "manipulation of United States imperialism." He also attempted to exclude the Soviet Union from the Afro-Asian conference that was to have been held in Algiers.

Chou was born in 1898 in Kiangsu province, China. He joined the newly founded Chinese Communist party in 1921 and the Kuomintang-Communist alliance in 1924. After the Nationalists and Communists split, he organized the nucleus of the Communist Chinese army. Chou continued to rise in the Communist party during the long civil war with the Nationalist forces, and, following the Communist victory in 1949, he became the first premier of Communist China.

Relations with Other Countries. Communist China launched vigorous diplomatic offensives in Africa and Asia for the dual purpose of undermining Soviet influence and encircling "Western imperialism led by the United States." While Premier Chou En-lai visited Algeria and the United Arab Republic in March and April, Foreign Minister Ch'en Yi toured Afghanistan, Pakistan, and Nepal. Peking became virtually the dominant power behind the Congo (Brazzaville) government in its efforts to build a "scientific Socialist state." It also succeeded in getting President Julius K. Nyerere of Tanzania to denounce United States involvement in Vietnam.

But Peking also had its frustrations. On Jan. 30, 1965, Burundi severed relations with China. In Kenya and Malawi, Peking was denounced for dubious activities and improper interference.

During his visit to Indonesia in August, Foreign Minister Ch'en Yi reportedly reached an understanding with President Sukarno to form a bilateral arrangement that would outflank United States positions in Southeast Asia. This Peking-Djakarta axis was shaken to its foundations, however, by an abortive leftist coup in Indonesia on September 30. After crushing the coup, Indonesian army leaders launched a violent campaign against the Communists. Under army pressure, President Sukarno, who had attempted to arbitrate the dispute between

COMMUNIST CHINA · Information Highlights

Area: 3,691,502 square miles.
Population: 750,000,000 (Jan. 1965 est.).
Chief Cities (1958 est.): Peking, the capital (1959 est.), 6,800,000; Shanghai, 6,977,000; Tientsin, 3,278,000; Mukden, 2,424,000.
Government: *Chief of State*—Liu Shao-chi (took office in 1959); *Communist Party Chairman*—Mao Tse-tung (head of party since the early 1930's); *Premier*—Chou En-lai (took office in 1949). *Parliament*—National People's Congress (3,040 members).
Religious Faiths: Buddhists, 20% of population; Muslims, 5%; Taoists, 4%.
Education: *Total school enrollment* (1958–59)—100,800,000 (primary, 90,000,000; secondary, 8,520,000; teacher-training, 620,000; technical, 850,000; higher, 810,000).
Finance (1960): *Revenues*, $35,010,000,000; *expenditures*, $35,010,000,000; *monetary unit* (1965), yuan (2 yuan equal U.S.$1).
National Income (1960): $84,500,000,000; average annual income per person, $123.
Manufacturing (metric tons, 1964): Crude steel, 13,600,000; cement, 10,500,000; cotton yarn (1960), 1,632,600; sugar, 2,110,000; aluminum, 100,000.
Crops (metric tons, 1964): Rice (1963), 78,400,000 (ranks 1st among world producers); soybeans, 10,770,000 (world rank, 2nd); peanuts, 2,291,000 (world rank, 2nd); tea, 158,800 (world rank, 3rd).
Minerals (metric tons, 1964): Coal 290,000,000 (ranks 1st among world producers); iron ore, 37,000,000 (world rank, 4th); salt, 11,000,000 (world rank, 2nd); manganese, 1,000,000 (world rank, 5th); gypsum, 590,000 (world rank, 14th); bauxite, 406,000 (world rank, 16th); crude petroleum, 62,050,000 barrels (world rank, 19th); lead, 100,000 (world rank, 8th); zinc, 100,000 (world rank, 11th).
Foreign Trade (1963): *Exports*, $1,600,000,000; *imports*, $1,100,000,000. *Chief trading partners* (1962): USSR (took 31% of exports, supplied 12% of imports); Albania (took 28% of exports, supplied 11% of imports).
Transportation: *Roads* (1958), 249,000 miles; *motor vehicles* (1963), 230,300 (automobiles, 32,700); *railways* (1963), 19,500 miles; *merchant vessels* (1964), 166 (613,000 gross registered tons); *interior airlines* (1964), 20.
Communications: *Telephones* (1948), 244,028; *television stations* (1964), 26; *television sets* (1964), 100,000; *radios* (1963), 8,000,000; *newspapers* (1955), 392 (daily circulation, 12,000,000).

the army and the Indonesian Communists, reportedly considered creating a new Indonesian Communist party purged of Chinese influence. Thus, Peking's relations with Djakarta appeared to be as uncertain as Indonesia's political situation.

United Nations. On Nov. 17, 1965, by a tie vote of 47 to 47, the UN General Assembly again denied Communist China a seat in the world body. An earlier resolution of the assembly had stipulated the issue of Chinese representation an important question, the decision of which would require a two-thirds majority of the members present and voting. Following the vote, *Jen Min Jih Pao* commented that "the United States may keep China out of the United Nations for 1,000 or even 10,000 years without harming China one iota." The Chinese Communist newspaper also indicated that Peking would not want to be a member unless the United Nations would free itself "from the control of the United States, rectify all its mistakes, and undergo a thorough reorganization and reform." Earlier in the year, Premier Chou En-lai had twice suggested the establishment of a "revolutionary United Nations unless the world organization purges itself."

Economy. Drought was reported in northeastern and western China in 1965, but emergency work by millions of peasants salvaged the summer harvest in a number of provinces. Bountiful crops were harvested in the Yangtze Valley and South China. Government officials estimated that overall agricultural production in 1965 would be higher than that of the preceding year.

While food output was returning to the level reached during the period immediately preceding the disastrous 1958 "great leap forward" campaign, agricultural production was unable to keep up with the demand created by the increase in population. However, life in China in 1965 was generally better than it was three years before, when food shortages were critical. In Canton, for example, the markets were well stocked with meat, poultry, fish, and vegetables. Rice and edible oils were still rationed throughout China, though less stringently.

Nuclear Test. Communist China exploded its second atomic device in the atmosphere on May 14, just seven months after its first nuclear test. The use of the more technically advanced uranium-235 as the explosive material led specialists to speculate that Communist China might develop a hydrogen bomb in a few years.

Peking calmly announced its second nuclear explosion. There was no organized demonstration to celebrate the event, and the brief official announcement was tempered by a statement that Communist China was developing nuclear weapons "solely for defensive purposes."

Military Affairs. Its nuclear successes notwithstanding, Communist China emphasized the role of its ground forces in its call for "realistic" preparation for nuclear war. The correct strategy against the United States, wrote General Lo Jui-ch'ing, chief of staff of the Chinese army, was "active defense" which would sacrifice territory to gain time and prepare for a counterattack and offensive by ground troops that would pursue and destroy the enemy "in his nest." In January 1965 the enlistment periods for land forces and special branches of the army were lengthened by one year and two years, respectively. The move was intended to give the soldiers better training in the use of advanced infantry weapons.

Steps were also taken by the Chinese Communists to tighten control over the army. In a decree published on May 25, Peking announced that generals and other officers would no longer wear insignia signifying rank. Political control of the army through party commissars was strengthened to ensure that "the party will control the gun, and the gun will never be allowed to control the party."

Ideological Struggle. Sympathy with so-called revisionism was found among an increasing number of party and government functionaries. According to *Jen Min Jih Pao,* some teachers of political theory "harbor revisionist views and distort and obliterate the thought of Mao Tse-tung by every conceivable means." Resentment against political pressure was also reported among young scientists and other intellectuals, who deplored the practice of holding so many political meetings and disagreed with the system of strict ideological control.

In a counterattack on these "heretical tendencies," Peking called for a militant class struggle that would turn every school campus into "an arena where the proletariat and the bourgeoisie are locked in violent combat." Books for children were to stress stories "stained with blood and tears" in the struggle against capitalism. A campaign against "Western bourgeois music" was launched in April; works by such classical Western composers as Ludwig van Beethoven were denounced as undesirable because they tended to create illusions of universal love and thus had paralyzing effects on "the revolutionary fighting will" of the listeners. Peking sounded the death knell of traditional operas and dramas when, at the close of a festival in August, it declared that modern plays should henceforth "completely eclipse traditional ones both in political and ideological content and in artistic quality."

Frontier Regions. Tibet was given the status of an autonomous region on Sept. 1, 1965. The change, however, did not affect Peking's absolute control over the region, since the local government remained, in reality, an agency through which Peking's decisions were channeled and implemented. Sporadic

SECOND NATIONAL GAMES were held in Peking in September. Athletes from the Tibetan Autonomous Region lead the ceremonial parade into the stadium on the opening day.

EASTFOTO

PICTORIAL PARADE

MME. CHIANG KAI-SHEK, on a trip to Washington, meets Mrs. Lyndon Johnson at the White House, September 14.

revolts by Khamba tribesmen were reported in Tibet, where, in the words of the Chinese Communists, the class struggle remained "protracted and complicated."

In February 1965, in the Sinkiang-Uigur region, a reform of the written language of Muslim minorities was ordered by the Chinese government. The Arabic script of the Uigur and Kazakh minority groups was to be replaced by a modified Latin alphabet based on a phonetic system for writing Chinese. The program was a step in the direction of assimilating the two groups.

NATIONALIST CHINA

Much of Nationalist China's diplomatic activity in 1965 was directed toward winning international support for the formation of an anti-Communist alliance in Asia. Internally, Taiwan's economy showed sufficient strength to survive the termination of United States economic aid, while the death of Vice President Ch'en Ch'eng left open the question of presidential succession.

Foreign Relations. In the face of Peking's threatening gestures in support of North Vietnam, Nationalist China reemphasized the theme that no peace in Asia could be maintained before effective actions were taken to crush Communist China. On March 29, 1965, President Chiang Kai-shek called for a three-stage strategy to recover the mainland: (1) the destruction of the Chinese Communist nuclear installations; (2) a popular uprising on the Chinese mainland; and (3) a quick breakthrough of Communist China's coastal defenses. To carry out this strategy, U.S. cooperation was necessary.

In August, Madame Chiang Kai-shek flew to the United States for her first visit in six years. In September, Chiang Ching-kuo, the minister of defense and son of President Chiang, paid a 10-day official visit to the United States. Although there was no indication that Washington encouraged the opening of a second battle front in Asia, both Madame Chiang and Chiang Ching-kuo expressed confidence that the Nationalists would recover the Chinese mainland in the near future.

In the summer, Foreign Minister Shen Ch'ang-huan paid official visits to New Zealand, Australia, and Japan. The main purpose of these trips was to promote in Asia an anti-Communist alliance of which South Korea and South Vietnam had already expressed approval. New Zealand and Australia, however, were more interested in having a meeting of the region's foreign ministers than in creating a stronger anti-Communist alignment.

In Japan, Shen Ch'ang-huan was confronted with the strong desire by Japanese officials to expand trade with Communist China, and he appealed to them to limit their trade with Peking. He emphasized the significance of former Japanese Prime Minister Shigeru Yoshida's letter to President Chiang in April 1964, in which Yoshida gave assurances that the Japanese government would not encourage trade with the Chinese Communists. Japanese officials were vague toward Shen's bid, but they expressed the desire to promote friendly relations with Taiwan. On September 22, Nationalist China and the Japanese Export and Import Bank signed an agreement to utilize Japan's yen credit of $106 million to de-

NATIONALIST CHINESE PRESIDENT Chiang Kai-shek (in black robe) attends funeral services for Vice President Ch'en Ch'eng, who died on March 5, 1965.

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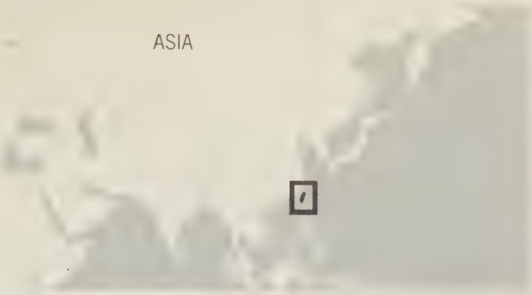
NATIONALIST CHINA · Information Highlights



Area: 13,885 square miles.

Population: 12,429,000 (June 30, 1965 est.).

Chief Cities (1963 est.): Taipei, the capital, 1,027,648; Kaohsiung, 539,771; Tainan, 375,101; Taichung, 336,280; Keelung, 258,412.

Government: *President*—Chiang Kai-shek (took office in 1948); *Premier*—Yen Chia-kan (took office in 1963). *Parliament*—National Assembly (1,521 members).

Religious Faiths: Roman Catholics, 2% of population; Protestants, 2%; Muslims, 3%.

Education: Literacy rate (1964)—96.7% of population aged 12 and over. *Total school enrollment* (1962–63)—2,605,635 (primary, 2,097,957; secondary, 366,313; teacher-training, 5,318; technical, 91,733; higher, 44,314).

Finance: *Revenues* (1964), $266,350,084; *expenditures* (1964) $292,552,953; *monetary unit* (1965), New Taiwan dollar (NT$40 equal U.S.$1).

Gross National Product (1964): $2,352,000,000.

National Income (1964): $1,921,400,000; average annual income per person, $160.

Economic Indexes (1964): *Industrial production*, 222 (1958=100); *agricultural production*, 136 (1956–57=100); *cost of living*, 148 (1958=100).

Manufacturing (metric tons, 1964): Cement, 2,355,000; sugar, 870,000; wheat flour, 247,000; gasoline (1963), 243,000; meat (1963), 220,000; cotton yarn, 50,520; aluminum, 17,749.

Crops (metric tons, 1964): Rice, 2,795,000 (ranks 13th among world producers); tea, 18,300 (world rank, 8th); sweet potatoes and yams, 3,383,000; cassava (1963), 217,000; peanuts, 116,000; citrus fruits, 67,000; tobacco, 17,100; jute, 17,000.

Minerals (metric tons, 1964): Salt, 602,000 (ranks 19th among world producers); bituminous coal, 5,027,000; clays, 1,014,000; lime, 92,000; pyrites, 46,700; iron ore, 7,100; copper, 1,738; silver, 60,633 troy ounces; gold, 17,660 troy ounces.

Foreign Trade (1964): *Exports*, $433,000,000 (chief exports: sugar, $128,000,000; rice, $20,000,000; tea, $7,900,000); *imports*, $428,000,000 (chief imports, 1963: raw cotton, $40,000,000; wheat and maslin, unmilled, $27,700,000; iron and steel, $25,100,000). *Chief trading partners* (1963): Japan (took 32% of exports, supplied 30% of imports); U.S. (took 16% of exports, supplied 42% of imports); South Vietnam (took 10% of exports, supplied 0.2% of imports).

Transportation: *Roads* (1964), 10,135 miles (1,777 paved); *motor vehicles* (1964), 30,456 (automobiles, 11,992); *railways* (1963), 2,308 miles; *merchant vessels* (1964), 103 (639,000 gross registered tons); *national airlines*, Civil Air Transport and Foshing Airlines; *principal airports*, Hualien, Kaohsiung, Keelung, Sungshan.

Communications: *Telephones* (1964), 132,524; *television stations* (1964), 2; *television sets* (1964), 18,000; *radios* (1963), 1,114,000; *newspapers* (1963), 32 (daily circulation, 750,000).

velop Taiwan's economy. The credit was part of the Japanese government's $150 million loan to assist development projects in Taiwan over a period of five years.

Termination of U.S. Aid. United States economic aid was formally phased out on June 30, 1965. But military aid was continued, and an estimated $178 million worth of materials and services under the economic aid program remained to be delivered within three years. In addition, development funds jointly established in July by Nationalist China and the United States were to provide an estimated $250 million for economic and social projects in the next five years. The money was to come from payments for U.S. aid-financed equipment, repayment of U.S. loans, and proceeds from the sale of United States surplus agricultural products. Nationalist China, commended as being one of the countries to have used American aid most successfully, found itself well on the path of economic development in 1965.

Economy. To facilitate industrialization, Taiwan planned to develop seven new industrial districts. Scheduled for development in 1965 were two districts at Kwei Shan and Ting Kan, both near Taipei, and one at Toufen, in Miaoli county.

Taiwan registered healthy growth in both the industrial and agricultural sectors of the economy in 1965. In spite of the plunging sugar price, income from sugar exports was relatively high.

Government. A major development of the political scene was the return to Taiwan in May of Thomas Liao, who formerly headed the so-called Taiwan Independence Movement and who had been a political refugee in Japan and other countries. He renounced the independence movement, which rapidly collapsed as one leader after another gave up the idea of Taiwan's secession from China. Upon his return, Liao was immediately pardoned by President Chiang.

The death of 67-year-old Vice President Ch'en Ch'eng on March 5, 1965, was mourned in Taiwan. (See NECROLOGY.) As vice president, he was the legal successor to the president, should the office become vacant. His death made the question of presidential succession more pressing than before.

Sea Battles. On May 1 a Nationalist patrol boat won a battle with a number of Communist gunboats, some 35 miles off the Matsu Islands. In another sea battle fought in the Formosa Strait on August 6, three Communist vessels were sunk and two Nationalist ships were lost. The sea engagements did not lead to large-scale military action between Nationalist and Communist China.

CHESTER C. TAN
Associate Professor of History
New York University

CHOU EN-LAI. See biographical sketch under CHINA.

CHRISTIAN CHURCHES (Disciples of Christ)

In the year 1965 worldwide membership in the Christian Churches (Disciples of Christ) totaled 2,153,599 persons, organized in 9,313 congregations. There were 218 missionaries and 2,009 national leaders serving in 13 fields. Church contributions for missionary, benevolent, and educational purposes totaled $13,246,726. The amount contributed in 1965 for all work, at home and abroad, was $93,346,814. Unified Promotion, the central receiving agency for missionary funds, received $12,173,417. The pension fund reported total assets in 1965 of $53,794,258.

In 1965, 13 Regional Assemblies were held in various parts of the United States between October 6 and 23. The 1966 Assembly will be held in Dallas, Texas, September 23–28.

New members of the Christian Churches totaled 92,252. This figure included 42,395 baptisms in the United States and Canada, and 49,857 transfers.

Ecumenical concerns were underwritten in part through the annual offering of the Week of Compassion, which in 1965 totaled $582,421. This fund was distributed for relief, rehabilitation, and educational services of the World Council of Churches and the National Council of Churches.

The headquarters of the Christian Churches (Disciples of Christ) are at 221 Ohmer Avenue, Indianapolis, Ind. This denomination's publications include *World Call*, a monthly, and *The Christian*, a weekly.

A. DALE FIERS
Executive Secretary

CHRISTIAN SCIENCE

In 1965, Christian Scientists set up new lines of communication with other churches and initiated efforts to identify basic areas of agreement between Christian Science and the other denominations. These efforts were in keeping with the theme of unity among races and religions stressed at the annual meeting in June of The Mother Church, The First Church of Christ, Scientist, in Boston, Mass. At this meeting Frances S. Wells of San Antonio, Texas, was elected president of The Mother Church.

Ralph E. Wagers, past church president and associate editor of religious periodicals, was appointed manager of the Board of Lectureship. Other lecturing appointments included Josephine H. Carver of Boston, Norman B. Holmes of Chicago, Glenn L. Morning of San Francisco, Jane Robbins of Boulder, and Edward C. Williams of Indianapolis.

The *Christian Science Monitor* appeared in a new five-column format in 1965, and doubled the size of its staff in an effort to achieve broader national and international news coverage.

In July the Christian Science Board of Directors announced plans for a 15-acre "church center" to accommodate the expanding headquarters activities in Boston. In August more than 4,500 college and university students from around the world attended the Biennial Meeting for Christian Science College Organizations held in Boston, Mass.

The Christian Science Pavilion at the New York World's Fair opened its doors during the 1965 season to several hundred thousand visitors.

New translations of the writings of Mary Baker Eddy were made in the Arabic, Efik, Finnish, Hebrew, and Hungarian languages.

DAVID E. SLEEPER
Manager, Committees on Publication
The First Church of Christ, Scientist, Boston

CHRONOLOGY, 1965. See the listing of important dates and the Topical Survey of the year's important events on pages 2 to 20.

CHURCH MEMBERSHIP, U.S. See RELIGION.

CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

In 1965 the church had 3,749 wards and independent branches in 400 stakes (territorial units), and 2,038 branches in 74 missions. There were approximately 16,275 missionaries serving in the missions and stakes throughout the world. Total church membership was 2,234,916, including 93,483 convert baptisms.

In 1965 the North Scottish Mission was made a part of the Scottish Mission, the Northeast British Mission was combined with the North British Mission, and the Bavarian Mission became part of the South German Mission. The British South Mission was organized from parts of the British Mission and the Southwest British Mission, and the Guatemalan-El Salvadoran Mission was created from a division of the Central American Mission.

On Oct. 29, 1965, President David O. McKay selected Joseph Fielding Smith and Thorpe B. Isaacson to serve as additional counselors in the First Presidency. Other counselors are Hugh B. Brown and N. Eldon Tanner.

In January, upon special invitation, the Salt Lake Mormon Tabernacle Choir participated in President Lyndon B. Johnson's inauguration. This choral program was broadcast to the world on radio and television by means of a Telstar communications satellite.

A record crowd of more than 100,000 witnessed the annual Hill Cumorah Book of Mormon pageant near Palmyra, N.Y.

The church introduced a new program of teaching and living the Gospel in the home. This provides for weekly home meetings where parents discuss Gospel truths with their children. The program is implemented by courses of instruction in the ward and stake priesthood quorums and at meetings of women's and children's organizations.

The Correlation Committee's emphasis upon the priesthood home teaching, welfare, genealogical, and temple programs, together with cultural and character-building activities of the auxiliaries among the young and old, gave new impetus to these programs.

A new plan of mission supervision enlarged the world assignments of the Council of the Twelve and others of the General Authorities. It divides the missions of the world into 12 large areas. A member of the Twelve will be directly in charge of each area, and will be aided by one or more assistants.

JOSEPH ANDERSON
Secretary to the First Presidency

CIGARETTES AND CIGARS. See TOBACCO.

CHURCHES OF CHRIST

The 2.5 million members of the Churches of Christ in 1965 placed renewed emphasis on promoting their plea for Christian unity based on the teachings of the New Testament alone. Church "Exodus" movements and "Inner City" programs emerged, and foreign mission activities, campaigns at home and abroad, and radio and television programs increased.

Exodus/Bay Shore, involving 60 families who moved in 1963 from the South and West to Long Island, New York, where they established the West Islip Church of Christ, furnished the inspiration for other groups. These groups prepared to move and exert a religious influence on their new neighbors.

The group of families from the Golf Course Road Church of Christ in Midland, Texas, who planned to move to Somerset County, N.J., in 1966, gave this explanation of their purpose. "Exodus/New Jersey is a creative adventure in faith planned for some 100 or more families—vocational missionaries—who will make a permanent move in August of 1966 to Somerset County, N.J., to establish a strong non-denominational church patterned after the doctrine of the New Testament."

"Inner city" areas, with their socially, economically, and morally deprived families, are increasingly attracting the attention of Churches of Christ. The Brookline (Mass.) Church of Christ, through its House of the Carpenter, led the way for similar programs in Chicago and Philadelphia.

ELZA HUFFARD
President, Northeastern Christian Junior College

CHURCHILL, Sir Winston

UPI

Sir Winston Churchill flashes his famous "V" for victory signal, symbolizing his determination to win World War II.

British on his father's side, American on his mother's, Sir Winston Leonard Spencer Churchill embodied and expressed the double vitality and the national qualities of both peoples. His names testify to the richness of his historic inheritance: Winston, after the Royalist family with whom the Churchills married before the English Civil War; Leonard, after his remarkable grandfather, Leonard Jerome of New York; Spencer, the married name of a daughter of the 1st duke of Marlborough, from whom the family descended; Churchill, the family name of the 1st duke, which his descendants resumed after the Battle of Waterloo. All these strands come together in a career unparalleled in British history for richness, range, length, and achievement.

Churchill took a leading part in laying the foundations of the welfare state in Britain, in preparing the Royal Navy for World War I, and in settling the political boundaries in the Middle East after the war. In World War II, he emerged as the leader of the united British nation and Commonwealth to resist the German domination of Europe, as an inspirer of the resistance among free peoples, and as a prime architect of victory. In this, and in the struggle against communism afterward, he made himself an indispensable link between the British and American peoples, for he foresaw that the best defense for the free world was the coming together of the English-speaking peoples. Profoundly historically minded, he also had prophetic foresight: British-American unity was the message of his last great book, *A History of the English-Speaking Peoples.*

His dominant qualities were courage—he did not know what fear was—and imagination. Less obvious to the public, but no less important, was his powerful, original, and fertile intellect. He had intense loyalty, marked magnanimity and generosity, and an affectionate nature with a puckish humor. Oratory, in which he ultimately became a master, he learned the hard way, but he was a natural wit. The artistic side of his temperament was displayed in his writings and oratorical style, as well as in his paintings. He was a combination of soldier, writer, artist, and statesman. He was not so good as a mere party politician. Like Julius Caesar, he stands out not only as a great man of action, but as a writer of it too. He had genius; as a man he was charming, gay, ebullient, endearing.

Important Dates in Churchill's Life

Born at Blenheim Palace, Nov. 30, 1874.
Graduated with honors from Sandhurst, December 1894.
Entered the British army, March 1895.
Taken prisoner by Boers in South Africa, November 15, 1899; escaped Dec. 12, 1899.
Elected to Parliament as Conservative M.P., 1900.
Elected as Liberal M.P., 1906.
Named undersecretary of state for the colonies, 1906.
Married Clementine Ogilvy Hozier, Sept. 12, 1908.
Became first lord of the Admiralty, Oct. 23, 1911.
Demoted after Dardanelles campaign, May 1915; resigned from government, November 1915.
Returned to Conservative party; appointed chancellor of the exchequer, 1924.
Resigned from cabinet, June 1929.
Became prime minister, May 10, 1940.
Signed Atlantic Charter during meeting with Roosevelt aboard ship off Newfoundland, Aug. 9–12, 1941.
Addressed joint session of U.S. Congress, Dec. 26, 1941.
Met with Roosevelt and Stalin at Teheran, Nov. 27–Dec. 2, 1943; at Yalta, Feb. 4–11, 1945.
Resigned as prime minister, April 5, 1955.
Warned West of Soviet aims, at Fulton, Mo., March 15, 1946.
Took office as prime minister, Oct. 26, 1951.
Resigned as prime minister, April 5, 1955.
Proclaimed honorary citizen of the U.S., April 9, 1963.
Died in London, Jan. 24, 1965.

As for personal defects, such a man was bound to be a great egoist—if that is a defect. So strong a personality was apt to be overbearing. He was something of a gambler, always too willing to take risks. In his earlier career, people thought him of unbalanced judgment partly from the very excess of his energies and gifts. That is the worst that can be said of him. With no other great man is the familiar legend more true to the facts. We know all there is to know of him.

Young Churchill: 1874–1900. He was born on Nov. 30, 1874, at Blenheim Palace, the famous palace near Oxford built by the nation for John Churchill, 1st duke of Marlborough, the great soldier. Blenheim, named after Marlborough's grandest victory (1704), meant much to Winston Churchill. In the grounds there he became engaged to his future wife, Clementine Ogilvy Hozier (b. 1885). He later wrote his historical masterpiece, *The Life and Times of John Churchill, Duke of Marlborough,* with the archives of Blenheim behind him.

His father, Lord Randolph Churchill, was a younger son of the 7th duke of Marlborough. His mother was Jennie Jerome; and as her mother, Clara Hall, was one-quarter Iroquois, Sir Winston had an Indian strain in him. Lord Randolph, a brilliant Conservative leader who had been chancellor of the exchequer in his 30's, died when only 46, after ruining his career. His son wrote that one could not grow up in that household without realizing that there had been a dis-

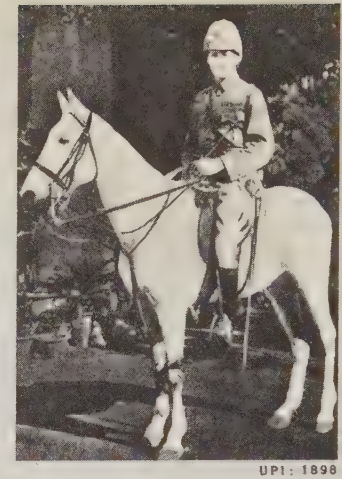
(*Continued on page 170*)

PICTORIAL PARADE: 1880

She shone for me like the evening star, Churchill said of his mother, the former Jennie Jerome of New York. *She always seemed . . . like a fairy princess.*

UPI: 1884

By being so long in the lowest form, he wrote about his school days at Harrow, *I was taught English. I got into my bones the essential structure of an ordinary English sentence—which is a noble thing.*



UPI: 1898

Talk of fun! Where will you beat this! He thus described his experience as an army officer in Africa when he was in his early 20's.

SIR WINSTON CHURCHILL (1874-1965)

UPI: 1941

As British prime minister in World War II, he roused his countrymen with the inspiring words: *You ask, what is our policy? I will say: It is to wage war, by sea, land and air, with all our might and with all the strength that God can give us. . . . Without victory, there is no survival.*

In the 1940 Battle of Britain, when nightly air raids reduced large parts of England's great cities to rubble, Churchill exhorted his countrymen: *Let us therefore brace ourselves to our duties, and so bear ourselves that, if the British Empire . . . last for a thousand years, men will still say, "This was their finest hour."*

UPI: 1940

He was knighted by Elizabeth II in 1954. In 1952, on the accession of the young queen, he had said: *I, whose youth was passed in the . . . Victorian era, may well feel a thrill in invoking . . . "God Save the Queen."*

BRITISH INFORMATION SERVICES: 1955

In 1952, Churchill addressed a joint session of the U.S. Congress for the fourth time. In his first speech to Congress (1941) he had said: *I cannot help reflecting that if my father had been an American and my mother British, instead of the other way round, I might have got here on my own.*

UPI 1952

UPI: 1908

I married and lived happily ever after, he wrote of his marriage to Clementine Hozier in 1908.

I am finished were his words upon learning of his dismissal as first lord of the admiralty in 1915, after the failure of the Dardanelles campaign which he had supported. Almost immediately, he went to France as an officer in the 2nd Grenadier Guards.

PIX 1915

In War: Resolution • In Defeat: Defiance • In Victory: Magnanimity • In Peace: Goodwill

We shall not flag or fail, he promised the British people. *We shall fight on the seas and oceans...we shall fight on the beaches, we shall fight in the fields and in the streets . . . we shall never surrender.*

UPI: 1945

ACME: 1946

From Stettin in the Baltic to Trieste in the Adriatic, an iron curtain has descended across the continent, he said in his famous speech at Fulton, Mo., in March 1946.

At 77, Churchill again campaigned for his seat in Commons. Three years later, as prime minister, he said: *If I stay on . . . it is because I have the feeling that I may . . . have an influence on what I care about above all else—the building of a sure and lasting peace.*

ACME 1951

UPI 1965

He was unafraid of death. *I am prepared to meet my Maker,* he once quipped. *Whether my Maker is prepared for the great ordeal of meeting me is another matter.* In a more serious vein, he said of death: *Only faith in a life after death . . . can give consolation.*

aster in the background. It was an early spur to him to try to make up for his gifted father's failure, not only in politics and in writing, but on the turf. Young Winston, though the grandson of a duke, had to make his own way in the world, earning his living by his tongue and his pen. In this he had the comradeship of his mother, who was always courageous and undaunted.

In 1888 he entered Harrow, but he never got into the upper school because, always self-willed, he would not study classics. He concentrated on his own language, willingly writing English essays, and he afterward claimed that this was much more profitable to him.

In 1894 he graduated from the Royal Military College at Sandhurst. He then was commissioned in the 4th Hussars. On leave in 1895, he went for his first experience of action to serve as a military observer and correspondent with the Spanish forces fighting the guerrillas in Cuba.

Rejoining his regiment, he was sent to serve in India. Here, besides his addiction to polo, he went on seriously with his education, which in his case was very much self-education. His mother sent out to him boxes of books, and Churchill absorbed the whole of Gibbon and Macaulay, and much of Darwin. The influence of the historians is to be observed all through his writings and in his way of looking at things. The influence of Darwin is not less observable in his philosophy of life: that all life is a struggle, the chances of survival favor the fittest, chance is a great element in the game, the game is to be played with courage, and every moment is to be enjoyed to the full. This philosophy served him well throughout his long life.

In 1897 he served in the Indian army in the Malakand expedition against the restless tribesmen of the North-West Frontier, and the next year appeared his first book, *The Story of the Malakand Field Force.* In the same year, 1898, he served with the Tirah expeditionary force, and came home to seek service in General Kitchener's campaign for the reconquest of the Sudan. Once again young Churchill managed to play the dual role of active officer and war correspondent. As such he took part at Omdurman in one of the last classic battles of earlier warfare—cavalry charges, a thin red line of fire against clouds of fanatical dervishes. The Battle of Omdurman was the end of a world. Once more Churchill wrote it up, and the whole campaign, in *The River War* (2 vols., 1899), a fine example of military history by an eyewitness. He made enemies among the professional soldiers by his frank criticisms of army defects. He entertained himself by writing a novel, *Savrola* (1900), which curiously anticipates later developments in history, war, and in his own mind.

On the outbreak of the South African War in 1899, he went out as war correspondent for the London *Morning Post.* Within a month of his arrival, he was captured when acting more as a soldier than as a journalist, by the Boer officer Louis Botha (who subsequently became the first prime minister of the Union of South Africa and a trusted friend). Taken to prison camp in Pretoria, Churchill made a dramatic escape and traveled, with a price of £25 on his head, via Portuguese East Africa back to the fighting front in Natal. His escape made him world-famous overnight. He described his experiences in a couple of journalistic books and made a first lecture tour in the United States. The proceeds from the tour enabled him to enter Parliament (M.P.'s were not paid in those days).

Rising Politician: 1901–1915. On Jan. 23, 1901, Churchill became member of Parliament for Oldham (Lancashire) as a Conservative. But he had returned from South Africa sympathetic to the Boer cause, and his army experiences had made him extremely critical of its command and administration, which he proceeded to attack all along the line. The tariff proposals of Joseph Chamberlain completed his alienation from the Conservative party, and in 1904 Churchill left the party to join the Liberals. In consequence he was for years execrated by the Conservatives, and was unpopular with army authorities.

As Liberal M.P. for Northwest Manchester (1906–1908) and for Dundee (1908–1918), he was in a position to share in the long Liberal run of power and to take his place in one of the ablest British governments in modern times. As undersecretary of state for the colonies he played a considerable part in making a generous peace with the Boers. In 1906 he published his authoritative biography, *Lord Randolph Churchill* (2 vols.,), and in 1908, *My African Journey,* a first-class example of his lifelong flair for journalism. In this year, 1908, he married and, in his own words, "lived happily ever afterwards." By his marriage to Clementine Hozier there were one son (Randolph) and four daughters (Diana, Sarah, Mary, and one who died in infancy).

As president of the board of trade (1908–1910) and home secretary (1910–1911), he contributed largely to the early legislation of the welfare state. He helped to create labor exchanges, to introduce health and unemployment insurance, to prescribe minimum wages in certain industries, and to limit working hours. As first lord of the admiralty (1911–1915), he was in a key position, as German naval power rose to its peak and modernization of the British fleet became an urgent necessity. Churchill's collaboration with Admiral Lord Fisher to this end was historic: it produced the changeover to oil-fueled ships from coalburning vessels, the creation of a naval air service, and the first development of the tank. With war approaching, Churchill, on his own responsibility, kept the fleet fully mobilized.

With the German onrush through neutral Belgium in 1914, he led a naval detachment to Antwerp, but failed to stem the tide. In 1915 he made himself responsible for the campaign to force the Dardanelles, with the aim of pushing Turkey out of the war, of linking up with Russia, and of taking the Central Powers in the rear. The campaign foundered, partly through bad luck, partly through lack of experience in combined operations. Churchill was made to take the responsibility, and when a coalition government was formed in May 1915, the Conservatives made it a condition that he should be dropped as first lord of the admiralty.

Changing Political Fortunes: 1916–1939. The Dardanelles failure seemed the end of his political career. He took up painting as a hobby and a consolation, and he remained devoted to it for the rest of his life. His accomplishment in the art should not be underestimated. In 1916 he went back to the army, gallantly volunteering for active service on the western front, where he commanded the 6th Royal Scots Fusiliers. But his energy and ability could not be dispensed with, and Prime Minister Lloyd George called him back to become minister of munitions.

At the end of the war, Churchill became secretary of state for war and also for air (1919–1921). In this post he pushed through army reforms and the development of air power, and became a pilot himself. He involved himself in much controversy by backing the efforts of the counterrevolutionaries against the Bolsheviks in Russia. As secretary of state for air and colonies (1921–1922), he took a leading part in establishing the new Arab states in the Middle East, while supporting a Jewish national home in Palestine as an act of historic and humanitarian justice. He was also closely concerned in the negotiations to establish the Irish Free State, and thus earned further Conservative distrust.

Having lost his seat in Parliament in the 1922 elections, Churchill lived in the political wilderness for the next two years. He was able to go forward with his memoirs, *The World Crisis* (5 vols., 1923–29), a large canvas. After various attempts to form a central, antisocialist grouping, he went back to the Conservative party in time to become chancellor of the exchequer in Prime Minister Stanley Baldwin's government (1924–1929). He was least happy in this office and ill at ease with economic affairs. Churchill was responsible for returning Britain to the gold standard, with the pound sterling set at $4.88 parity. This step was in conformity with the best expert advice, though Churchill's instinct was against it, and the policy was disastrous. It led to the coal strike, which precipitated the general strike in 1926. The general strike left a legacy of ill will and justified resentment throughout the labor movement, in particular a distrust of Churchill. It helped to bring about widespread unemployment, and was a factor in creating the world economic crisis that undid the recovery from World War I, promoted Hitler's rise to power in Germany, and brought about World War II.

During the whole of this disastrous period of 1929–1939, Churchill was out of office. During these years of political frustration he wrote his major works: *Marlborough* (4 vols., 1933–38); the first draft of *A History of the English-Speaking Peoples* (4 vols., 1956–58); a vivid and characteristic autobiography, *My Early Life* (1930); a revealing and suggestive book, *Thoughts and Adventures* (1932); and a volume of brilliant, if generous, portrait sketches, *Great Contemporaries* (1937). He also began to collect his speeches and newspaper articles warning the country of the wrath to come.

No one would take heed of his reiterated warnings of the folly of attempting to appease Hitler and of the necessity to bring together a "Grand Alliance" against the aggressor powers before it was too late. Baldwin and Chamberlain were too solidly entrenched in power to shift. Churchill tried to rally the right-wing Conservatives against Baldwin's liberal Indian policy, and he backed Edward VIII against Baldwin at the time of the king's abdication in 1936. These weapons broke in his hands, and only lost him support. Appeasement of Hitler went on to the bitter end.

When war came in 1939, Churchill was inevitably recalled, as first lord of the admiralty. The signal went round the fleet, "Winston is back," a quarter of a century after his first going to the post. But the first wave of German military power overwhelmed Poland in September, and in the spring of 1940 the tidal wave overwhelmed northwestern Europe, followed shortly afterward by the fall of France.

War Leader: 1940–1945. On May 10, 1940, in the midst of this cataract of disasters, Churchill was called to supreme power and responsibility by a spontaneous revolt of the best elements in all parties. He, almost alone of the nation's political leaders, had had no part in the disaster of the 1930's, and he really was chosen by the will of the nation. For the next five years, 1940–1945—perhaps the most heroic period in Britain's history—he held supreme command, as prime minister and minister of defense, in the nation's war effort. At this point his life and career became one with Britain's story and its survival.

At first, until 1941, Britain fought on alone. Churchill's task was to inspire resistance at all costs, to organize the defense of the island, and to make it the bastion for an eventual return to the continent of Europe, whose liberation from Nazi tyranny he never doubted. He breathed a new spirit into the government and a new resolve into the nation. Upon becoming prime minister he told the Commons: "I have nothing to offer but blood, toil, tears, and sweat . . . . You ask, what is our policy? I will say: It is to wage war, by sea, land, and air, with all our

As British wartime prime minister, Churchill attended a summit conference at Yalta, USSR, in February 1945, to discuss Allied war strategy and postwar planning with U.S. President Franklin D. Roosevelt and Soviet Premier Joseph Stalin.

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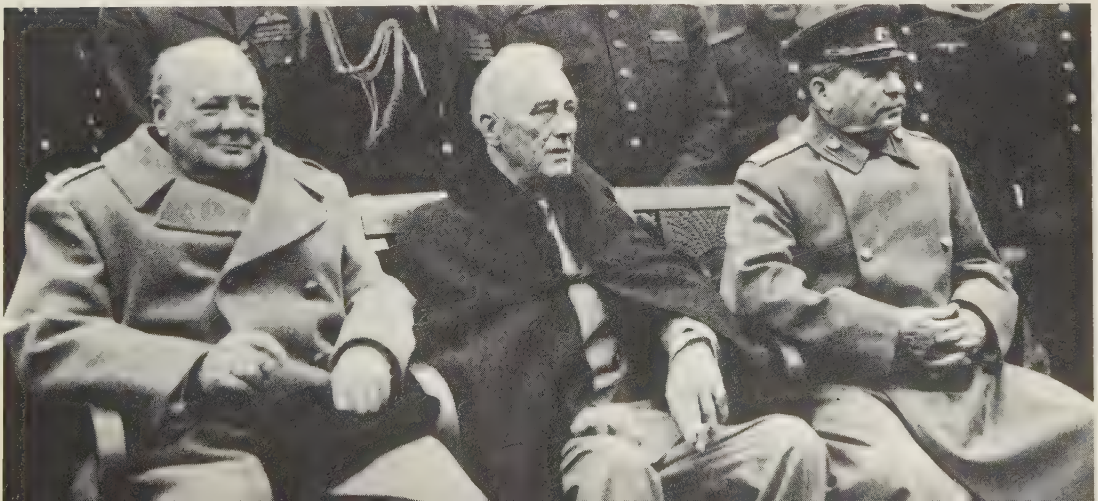

might . . . . You ask, what is our aim? I can answer in one word: Victory."

Meanwhile he made himself the spokesman for these purposes among all free peoples, as he made Britain a home for all the faithful remnants of the continental governments. These included the Free French, for Churchill had himself picked out Charles de Gaulle as "the man of destiny." But Churchill's personal relationship with President Franklin D. Roosevelt was Britain's lifeline. Britain had lost most of her army equipment in the fall of France and during the evacuation of the British Expeditionary Force from Dunkirk in June. Roosevelt rushed across the Atlantic a supply of weapons that made a beginning.

By the autumn of 1940, Churchill was convinced that Germany could not bring off the invasion of Britain. Secure in this conviction, he took the momentous decision to send one of the only two armored divisions left in Britain to Egypt, to hold the land bridge to the East. Submarine warfare had placed a severe strain on the British navy, and Roosevelt again came to Britain's aid with the lease of 50 destroyers. Churchill took the grievous decision to cripple the French fleet at Oran, Algeria. He could not take the risk of the French navy's being taken over by the Germans, for this probably would have been the end for Britain.

The turning point of the war came in 1941, when Churchill took advantage of his opponents' mistakes. Hitler's invasion of Russia brought Russia into the war, and Churchill seized the opportunity of welcoming a powerful ally with both hands. Japan's attack on Pearl Harbor brought the United States into the war, and Hitler made the mistake of declaring war on the United States. Churchill's unforgettable speech to Congress after Pearl Harbor expressed something of the inspiration and high resolve in the face of mortal danger that he had given his countrymen while they had fought on alone for over a year.

The "Grand Alliance" to combat aggression that he had had in mind from the 1930's was now a fact. Churchill made himself the linchpin, journeying uncomplaining between Roosevelt and Stalin, though an older man than either. It was possible now to plan the liberation of the world from the aggressors. He and Roosevelt set forth their war aims in the Atlantic Charter, signed aboard ship off Newfoundland in August 1941.

The first fruits of Allied cooperation were the landings in North Africa, the rounding up of the Nazi forces there, and the invasion of Sicily and Italy, "the soft under-belly of the Axis." It proved harder going than was expected, supporting Churchill's opposition to the opening of a second front in the west. Not until the summer of 1944 were the preparations complete for the invasion of Normandy, to break open Hitler's Europe. Churchill had always had an acute personal interest in combined operations, and he regarded the mobile "Mulberry" harbors as in large part his own idea. Only the personal order of King George VI prevented the prime minister from landing with the landing forces on D-day.

The last year of the war saw the famous partnership between Churchill and Roosevelt dissolving. Churchill looked to the shape of things that would emerge after the war, with the immense accession of strength to Russia and to communism in Europe. At the summit conferences in Teheran and Yalta, Churchill was grieved to find the president not supporting him in his struggle with Stalin to contain Russian expansion after the war. On the surrender of Germany in May 1945, Churchill rode around London in the victory celebrations, but, as he wrote, there was foreboding in his heart.

Peacetime Leader: 1945–1955. Before the surrender of Japan, Churchill's wartime government broke up, and the Labour party won a large majority in the general election of July 1945. Churchill was deeply affected by this blow, though it was in no sense a vote of censure upon him but upon 20 years of Conservative rule. He continued to enjoy the esteem of his countrymen while remaining leader of the opposition Conservative party.

He turned to writing a personal history, *The Second World War* (6 vols., 1948–1953), and to painting, exhibiting regularly at the Royal Academy. Though he was out of office, his prestige was a major asset to his country. In his famous "iron curtain" speech at Westminister College in Fulton, Mo., he warned the West against Russia's aims and the aggrandizement of communism, making a plea for cooperation between the English-speaking peoples as the only hope of checking it. This aroused a storm of controversy in the United States, but events soon confirmed Churchill's view of the world picture.

On Oct 26, 1951, at the age of 77, he again became prime minister, as well as minister of defense. As the Conservatives held a very small majority and Britain faced very difficult economic circumstances, only the old man's willpower enabled his government to survive. He held on to see the young Queen Elizabeth II crowned at Westminster in June 1953, himself attending as a Knight of the Garter, an honor he had received a few weeks earlier. In 1953, also, he received the Nobel Prize in literature. On April 5, 1955, in his 80th year, he resigned as prime minister, but he continued to sit in Commons until July 1964.

Last Years. Churchill's later years were relatively tranquil. In 1958 the Royal Academy devoted its galleries to a retrospective one-man show of his work. On April 9, 1963, he received, by special act of the U.S. Congress, the unprecedented honor of being made an honorary American citizen. When he died in London on Jan. 24, 1965, at the age of 90, he was acclaimed as a citizen of the world, and on January 30 he was given the funeral of a hero. He was buried at Bladon, in the little churchyard near Blenheim Palace, his birthplace.

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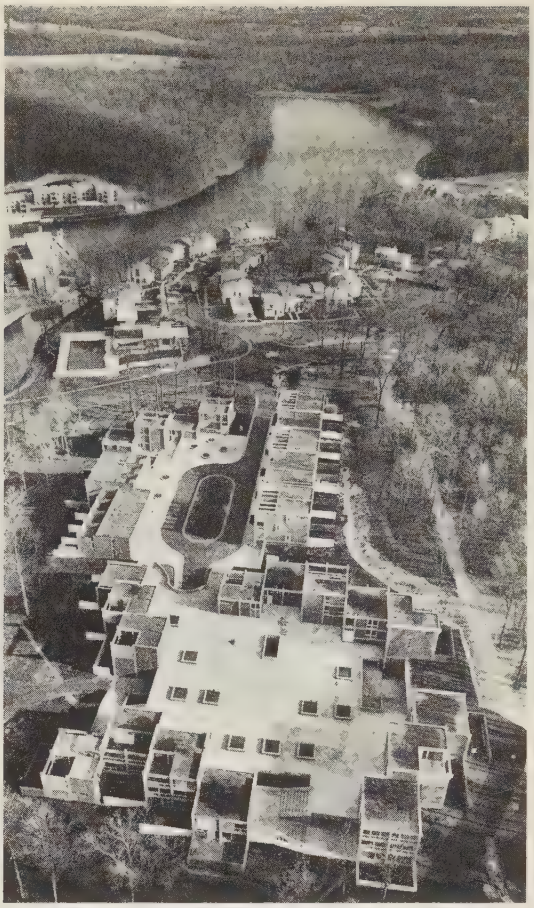
FULLY PLANNED TOWN of Reston, Va., shown in these photos, was created as a unit and opened on Dec. 4, 1965.

THE NEW YORK TIMES

SINGLE- AND MULTIPLE-FAMILY HOMES line shores of man-made lake in the new community near Washington, D.C.



HOUSES OF MODERN DESIGN (foreground) are connected by roof terrace. Part of town center is at upper left.

CIGARETTES. See PUBLIC HEALTH; TOBACCO.

CITY PLANNING

Municipal planning officials devoted most of their attention in 1965 to the improvement of downtown areas in their respective cities. By the end of 1965, many American cities had initiated, completed, or were actively engaged in redeveloping central districts that long ago had fallen into woeful neglect. Until recently, urban construction was focused primarily on housing developments in slum areas of the city and in open areas near its perimeter. In the early 1960's, private developers and city planners began to shift their emphasis from residential to commercial and administrative structures, and from the perimeter of the city to its dilapidated center.

Urban Renewal. By 1965, major urban renewal projects were in full swing in many large cities throughout the United States. In Cleveland, Ohio, roughly $250 million and 194 acres of land were committed to downtown construction, dominated by the gleaming façade of the huge Erieview Plaza building. Philadelphia devoted itself to the completion of its $120 million Penn Center near City Hall—an immense complex of office buildings, bus terminals, hotels, and underground concourses. In Boston, within easy walking distance of the historic Common, six large redevelopment projects were in various stages of construction. Baltimore placed the finishing touches on its highly modernistic civic center, and St. Louis completed the Gateway Arch designed by Eero Saarinen (See SAINT LOUIS). In the midst of a bitter controversy over a plan to build a Lower Manhattan expressway, New York City continued to add to the massive array of glass and metal office buildings that dominate Park Avenue in midtown and parts of the financial district.

An increasing number of urban dwellers, however, were seriously questioning the attractiveness of the renewal projects, and asking whether the projects enhanced or diminished man in relation to the American city. Many of the renewal structures were criticized as architecturally uninspired glass monuments, monotonously rectangular in form and overwhelming in height. Many of the redevelopment projects and structures impart a sense of crushing oppression to cities that have already reached gigantic proportions and sprawl over scores of square miles. Many critics found newly constructed government buildings in Boston's Scollay Square a tasteless backdrop to the colorful State House, and regarded the glass canyons leading through Penn Center to Philadelphia's City Hall as an incongruous vista in a city famed for its Georgian structures. It has been argued that urban sprawl has two dimensions: it reaches far over the face of the land and looms upward into the sky. Many feel that the American city is becoming too large for the average citizen to grasp and too overwhelming to arouse his civic interest.

Urban Transportation. The growth of American cities, both upward and outward, has created a need for new or improved transportation to business centers. For nearly 20 years the automobile nibbled away at the dominance of rail transportation, until the major streets in most cities were strangled by vehicular traffic. In many parts of large cities, automobiles, trucks, and buses became the principal sources of air pollution and noise. (See POLLUTION.) With the increase in traffic congestion, a number of American cities awakened to the need for new or improved systems of rail transportation within the community and between cities.

San Francisco took the most ambitious and far-reaching step in this direction. Known as the Bay Area Rapid Transit System District (BART), San Francisco's new rail system will consist of 75 miles of underground, surface, and elevated track, reaching from the center of the city into the two counties that house most of the city's commuters. BART will be fully operating by 1969. Its air-conditioned trains, moving at an average speed of 50 miles per hour, will be controlled by scheduling devices that will provide trains every two or three minutes at rush hours.

Although BART will represent the most advanced form of commuter transportation in an American city, San Francisco is not the only community to adopt a rapid transit system. In September 1965, President Johnson signed an authorization for constructing a long-overdue subway system in Washington, D.C. The new system, consisting initially of 25 miles of track, will eventually be expanded to 83 miles, extending from the center of the capital into its Maryland and Virginia suburbs. The subway is expected to begin operating in 1970.

As recently as November 1964, the voters of Atlanta, Ga., approved a constitutional amendment to build an extensive rapid transit system, and plans were under way in 1965 to construct 65 miles of track. Many cities with established rapid transit systems are planning to improve or extend existing facilities, but their plans, in most cases, fall far short of a real solution to their mounting transportation problems.

In Los Angeles, plans for a rapid transit system similar to BART were quashed by the state legislature with the explanation that the system was to be financed by a special tax on motorists. Ironically, motor vehicles produce most of the acrid smog that afflicts the city during summer months.

A great deal of attention during 1965 was devoted to novel forms of high-speed, intercity transportation. Inspired partly by Japan's "two-mile-per-minute" rail service between Tokyo and Osaka, the U.S. Congress passed legislation to investigate the feasibility of a high-speed transit system between Boston, New York City, and Washington, D.C. As a result of this legislation, it is hoped that ultimately new ways will be found to reduce rail travel time between northeastern coastal cities to a fraction of the time now required.

Urban Government. Developments in transportation have a profound effect on developments in urban government. Theoretically, the historical ideal of American government is federalism, a political system based on decentralized communities. In practice, federalism has been yielding steadily to centralized government—regional, state, or national—and the average citizen often feels that he has surrendered his sovereignty in public affairs to the professional specialist.

The trend toward centralization and professionalism is especially clear in municipal government. Many cities, because they are extensive urban complexes, cross several county and state lines, conflicting with traditional village and town jurisdictions inherited from a decentralized community culture. The New York metropolitan area, for example, encompasses more than 1,000 separate governments, and the Chicago area, more than 900.

The problem of managing these separate jurisdictions as a single entity is giving rise to periodic governors' conferences, regional commissions, and interstate authorities. For example, the air pollution control board in Los Angeles County now deals with the pollution problems of a large complex of separate communities and is the prototype for a new form of regional government. The Port of New York Authority, although it is a unit of local government, involves the interests of two states, New York and New Jersey.

Increasingly, cities are vesting authority in professional city managers and city planners, few of whom are elected by the municipal constituency. More and more, architects, engineers, lawyers, and technicians are making vital municipal decisions that were once debated and formulated by the citizenry. The federal government participates in local urban affairs by providing funds for renewal projects, road-building programs, and water and air pollution control. A cabinet-level Department of Housing and Urban Development was established in August 1965, to help cities cope with their problems. On Jan. 18, 1966, Robert C. Weaver, former administrator of the Housing and Home Finance Agency, was sworn in as head of the department. The federal government can now be expected to wield even more influence in municipal affairs.

Short of decentralizing the large cities, there seems to be no solution to the diminishing authority of the individual citizen over his immediate urban area. There is some evidence of a trend toward decentralization, although it is overwhelmingly outweighed by the trend toward centralization. A national program for so-called new towns or satellite cities was proposed to Congress by President Johnson in May 1965; and in August 1965, Arthur T. Row, Jr., professor of city planning at Yale University, advanced a plan for building satellite cities in the New York metropolitan area.

The satellite city concept, which gained impetus from Britain's New Towns Act of 1946, envisions largely self-sustaining communities near big urban centers. Designed to prevent excessive congestion, the satellite cities hold some promise of providing the average city dweller with greater authority over the destiny of his community. Several satellite cities, privately financed, are now being planned or are under construction outside Los Angeles, Houston, and Washington, D.C. However, these projects represent only a miniscule countertendency to the formless urban belts and highly centralized regional governments that are emerging in the metropolitan areas of the United States. (See also WATER SUPPLY.)

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CIVIL AVIATION. See AERONAUTICS.

CIVIL DEFENSE. See NATIONAL DEFENSE.

CIVIL ENGINEERING. See BRIDGES; CANALS; DAMS; HIGHWAYS; RAILROADS; TUNNELS.

CIVIL RIGHTS

PIX

NEGRO AND WHITE CIVIL RIGHTS WORKERS marched from Selma to Montgomery, Ala., March 21–25.

CIVIL RIGHTS

Civil rights legislation in 1965 concentrated on making the civil rights of Negroes a reality. The most important single piece of civil rights legislation, the Voting Rights Act of 1965, provided not only for the suspension of "tests and devices" where they were administered to prevent Negroes from voting, but also, under certain circumstances, for the appointment of federal registrars. Legislation improving educational facilities and raising the standard of living in depressed areas is also expected to benefit the Negro's fight for equality.

The judiciary in general and the U.S. Supreme Court in particular have long been held to be the ultimate protectors of American civil liberties. In recent years, in addition to important legislation protecting civil rights—the Civil Rights Acts of 1957, 1960, and 1964—there have been historic decisions by the Supreme Court. In 1965 the court added to this list by holding that portions of the Civil Rights Act of 1964 are constitutional.

Although 1965 saw no civil rights demonstrations of the magnitude of the 1963 march on Washington, voter registration drives in the South and protests against *de facto* school segregation in the North continued. Violence erupted in Watts, the Negro section of Los Angeles, in August, and was not brought under control until hundreds of persons had been injured and several killed. Probably the most important demonstration of 1965 was the "freedom march" from Selma to Montgomery, Ala., in March.

VOTING RIGHTS ACT OF 1965

Like the right of free speech, the right to vote is a basic pillar of a democratic society. The Voting Rights Act of 1965, the culmination of countless attempts to guarantee the franchise to the Negro, was a "promissory note" that this constitutional guarantee would be made effective. It gave legislative meaning and sanction to the century-old 15th Amendment to the U.S. Constitution, which had been enforced only through isolated decisions of the judiciary, particularly the U.S. Supreme Court. The Voting Rights Act cannot be considered solely from the legal point of view. It also must be measured in light of the marches and demonstrations, such as those that took place in 1965 in Selma, Ala., that gave impetus to its passage, and in its effect on traditional federal-state relations by emphasizing that the United States is one nation, not 50.

Background. The Voting Rights Act must be understood in historical perspective. Before the act, particularly in the deep South, the Negro was effectively barred from exerting his constitutionally guaranteed privileges. In 1964, Alabama's voting lists included 70% of the potential white electorate, but only 23% of possible Negro voters. Only recently has there been an increase in Georgia's Negro registration, to 44% of those eligible, compared with 75% of eligible whites. Mississippi, with a majority Negro population, counted only 29,000 Negroes among its 550,000 registered voters. Much the same picture was found in Louisiana and South Carolina, and even in some of the border states.

Discrimination was made effective in the South by the threat of force or by the application of economic sanctions against the Negro community. Furthermore, as administered, literacy tests, "understanding tests," or poll taxes allowed the white but not the Negro applicants to register and vote. These measures replaced the long-outlawed "grandfather clauses" (an individual could vote if his grandfather could vote) and the device excluding Negroes in Democratic primary elections, in a one-party system in which only whites could be members of the party. The Civil Rights Acts of 1957 and 1960 had been ineffective against discriminatory practices, since their provisions for inspection of voting records were insufficient to guarantee voting rights to all.

Provisions of the 1965 Act. The 1965 act provides for the suspension of "tests and devices" (such as

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THE RIGHT TO VOTE was reinforced on August 6 when President Johnson signed the Voting Rights Act of 1965.

tests in which the applicant is required to read and explain extremely difficult parts of a state constitution) in cases where the U.S. attorney general determines that such tests or devices were in force on Nov. 1, 1964, and where less than 50% of the persons eligible to vote had been registered on that date or had voted in the presidential election of November 1964. By this provision, the act clearly was aimed at the centers of hard-core resistance.

Furthermore, the act provided that if state registrars and clerks refused to register Negroes, even with state regulations suspended, the U.S. attorney general was empowered to institute court proceedings by which federal examiners would be appointed to register the victims of discrimination, for both federal and state elections. Another provision benefited non-English-speaking persons, particularly Puerto Ricans, by banning English literacy tests and substituting the requirement of completion of the sixth grade in a school in American flag territory. A federal Court of Appeals decision upheld this section, and superseded a New York Supreme Court decision holding to the contrary.

Constitutionality. Most experts in constitutional law have given the green light to the Voting Rights Act. At issue is the reconciliation of the 15th Amendment with Article I of the Constitution, which gives the states the power to determine who shall vote, not only in state elections but also in federal elections. The 15th Amendment is largely negative in its phraseology, declaring that a state may not abridge the right to vote because of "race, color, or previous condition of servitude." But the unfamiliar second clause of this amendment gives Congress the power "to enforce this article by appropriate legislation." Until 1965, this clause was not used, and any enforcement of the right to vote had usually been in the hands of the judiciary. Although there had been some accomplishments, such as the outlawing of certain discriminatory state statutes, the administration of "tests and devices" prevented any real breakthrough in Negro voting registration.

The Voting Rights Act of 1965, approved by Congress on August 4, would seem to be the kind of "appropriate" legislation referred to in the 15th Amendment. On Oct. 21, 1965, the Justice Department, in an unusual move, asked the Supreme Court to use its original jurisdiction to declare the act constitutional. This, in effect, would prevent obstruction of the new law by the voting laws of Alabama, Louisiana, Mississippi, and South Carolina, where state courts have ordered local officials not to enroll Negroes registered by federal examiners. Through September, federal examiners in the first three states had certified some 46,000 voters, but none had been placed on state lists. Relative to South Carolina, the law was to be tested in a case set for argument before the U.S. Supreme Court in January 1966.

Federal-State Relationship. Another important issue raised by the Voting Rights Act is the practical effect of direct federal action in what has long been regarded as a basic right of the states—the determination of who can vote. The states recognized this issue in the 1965 statute, because immediately after the act was signed into law by President Johnson in the presence of Roy Wilkins and other civil rights leaders on August 6, literacy tests as a prerequisite to voting were suspended in Alabama, Alaska, Georgia, Louisiana, Mississippi, South Carolina, and Virginia, in 26 counties of North Carolina, and in one county of Arizona. Suits were also filed in federal district courts to outlaw the poll tax in Alabama, Mississippi, Texas, and Virginia.

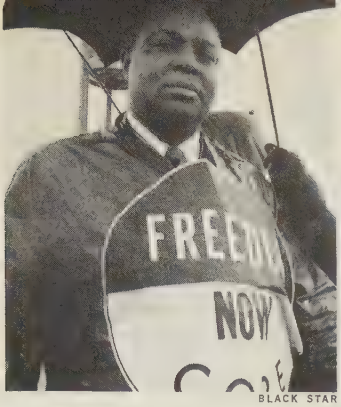
As of November 1, federal voting registrars had been sent into only 20 counties. This caused some ill-feeling between the Justice Department and civil rights leaders. The attorney general hoped that the suspension of "tests and devices" would force states to cooperate without the need of even greater federal interference, but civil rights groups wanted their own efforts reinforced by a quickened pace of federal intervention through voting registrars.

Civil Rights Demonstrations. The Voting Rights Act was directly connected with public civil rights demonstrations, such as those held in Selma, Ala., in 1965. It was in Selma that Rev. Martin Luther King, Jr., instituted the voter registration campaign that resulted in demonstrations and arrests in February, "Bloody Sunday" (March 7), and finally, the 54-mile "freedom march" from Selma to Montgomery on March 21–25, protected by the federalized Alabama National Guard.

SCHOOL SEGREGATION

Congress provided $1.3 billion in aid for elementary and secondary schools in 1965. A problem connected with federal aid for schools is the very practical one of aid to segregated schools. There is a question as to the amount of pressure the federal government can use to accelerate the *de jure* desegregation required "with all deliberate speed" by the Supreme Court decisions of 1954 and 1955.

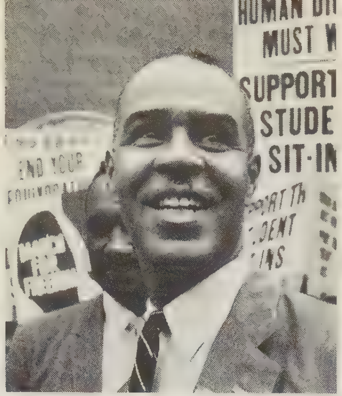
Desegregation and Federal Aid. Acting under Title VI of the Civil Rights Act of 1964, by which recipients of federal education aid must carry on activities without dicrimination, U.S. Commissioner of Education Francis Keppel decreed on April 29, 1965, that aid would not be given to a public school system after the fall of 1967 unless all its grades were integrated. He also stated that a "substantial good faith start" must be made not later than the fall of 1965, with some degree of integration in four grades: the first grade of elementary school, the first grade of junior high school, and the



BLACK STAR

JAMES FARMER, former national director of the Congress of Racial Equality (CORE), is the grandson of a slave. He pioneered in the use of sit-ins and freedom rides in civil rights demonstrations. In April 1965 he led CORE's voter registration drive in Bogalusa, La. In June, Farmer was one of 225 persons arrested in Chicago demonstrations protesting the slow pace of school desegregation there. In July he was back in Bogalusa to resume the voter registration drive.

Farmer was born on Jan. 12, 1920, in Marshall, Texas. He studied for the Methodist ministry at Howard University (B.D., 1941), but refused to become a minister because the Methodist Church in the South was segregated. He organized the first chapter of CORE in Chicago in 1942, later became national chairman of the organization, and in 1961 was made national director. On December 25, Farmer resigned from CORE, effective March 1, 1966, to head a private agency in Washington, D.C.



PIX

ROY WILKINS, executive secretary of the National Association for the Advancement of Colored People (NAACP), has stressed the Negro's responsibilities as a citizen. On Jan. 4, 1965, he announced that the NAACP would begin a nationwide program of "citizenship clinics" for Negroes. With other civil rights leaders, Wilkins was present on August 6 when President Johnson signed the Voting Rights Act of 1965. When rioting broke out among Negroes in Los Angeles later in August, Wilkins called for a study of the causes, emphasizing that "the Negro community as well as the white community must assume adult responsibility. . . ."

Wilkins was born in St. Louis, Mo., on Aug. 30, 1901. He grew up in St. Paul, Minn., graduating from the University of Minnesota in 1923. He went to work as a newspaperman, and in 1934 became editor of *Crisis*, the official organ of the NAACP. He was appointed executive secretary of the NAACP in 1955.

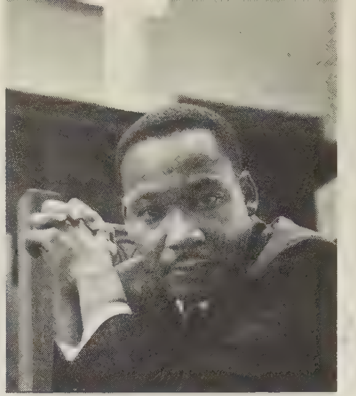


PHOTO RESEARCHERS

MARTIN LUTHER KING, JR., led some 3,200 whites and Negroes on a "freedom March" from Selma to Montgomery, Ala., from March 21 to 25, 1965. From July 24 to 26, he led a campaign against *de facto* school segregation in Chicago, culminating in the largest civil rights demonstration in Chicago's history—a march to the City Hall by 10,000 to 20,000 demonstrators on July 26.

King was born in Atlanta, Ga., on Jan. 15, 1929. After graduating from Atlanta's Morehouse College in 1948, he attended Crozer Theological Seminary in Chester, Pa. (B.D., 1951), and earned his Ph.D. at Boston University in 1955. He became a national figure in 1955 when, as president of the Southern Christian Leadership Conference, he led a successful bus boycott by Negroes in Montgomery. In 1963 he was one of the leaders of the civil rights march on Washington, D.C. King was awarded the 1964 Nobel Peace Prize for his work on behalf of Negro civil rights.

first and last grades of high school. Keppel also insisted that steps must be taken toward faculty desegregation.

In an early report, the commissioner pointed out that pledges of compliance, or court orders, or voluntary desegregation plans, had been given by some 19,000 of the nation's 27,000 school districts. However, very few of these had come from Southern and border states. It is likely that financial pressure exerted by the federal government will be more effective than Supreme Court decisions in establishing school desegregation in the recalcitrant districts where *de jure* segregation exists.

De Facto Segregation. Events of the summer and fall of 1965 underscored the problem of *de facto* segregation. In June, James Farmer of CORE led a demonstration against *de facto* school segregation in Chicago. In July, at the White House Conference on Education, a special panel agreed that *de facto* segregation must go. However, the threat of withdrawing federal aid because of *de facto* segregation, as it exists in many Northern cities, is quite a different matter from the same threat against intentional discrimination.

Many political and educational leaders agreed that any federal attempt to achieve desegregation at the expense of the neighborhood school concept could produce an adverse effect on the entire civil rights movement. The 1965 mayoralty campaign in New York City had undertones of appealing to white sentiment for retaining the neighborhood school, and

CIVIL RIGHTS DEMONSTRATORS picket the White House in March, calling for federal intervention in Alabama.

UPI

How Many Must D
Bef ?
STOP BRUTALITY

PICTORIAL PARADE

FREEDOM MARCHERS gather on the Dallas County Court House steps in Selma, Ala., before march to Montgomery.

candidates for Boston's school board apparently campaigned with this appeal in mind.

In October, national attention was again focused on Chicago, where, because of "probable noncompliance" with the Civil Rights Act of 1964, Commissioner Keppel froze more than $30 million in federal aid to the city's schools. Chicago's school superintendent, Benjamin C. Willis, retorted that "education is a state function and Congress did not give Mr. Keppel the power to alter this." After President Johnson's intervention, the funds were released.

The opposite official attitude toward *de facto* racial imbalance was indicated in New York State, where the Court of Appeals refused to review an action of the state commissioner of education which eliminated *de facto* segregation in the town of Hempstead, L.I. (See NEW YORK.) On the other hand, in a case argued before it (*Downs* v. *Board of Education*), the U.S. Supreme Court refused to review a lower court decision that upheld the redrawing of school district lines on a neighborhood and pupil-load basis, even though racial imbalance resulted. (See also EDUCATION.)

OTHER LEGISLATION

Much civil rights legislation was approved by the states in 1965. By September, the number of states with fair-housing laws had increased to 16. Several states passed laws in 1965 against discrimination in public accommodations, and almost three quarters of the states now have such statutes. Eight states passed fair employment practice laws, bringing the total to 32. Some of this progress resulted from the federal Civil Rights Act of 1964, which deferred federal action against states that have laws forbidding discrimination in employment and places of public accommodation because of race or color.

The effectiveness of civil rights legislation varied with the type of discrimination. For example, the events in Selma and the passage of the 1965 Voting Rights Act proved that previous legislation in this area had not been sufficient. The provisions of the 1964 Civil Rights Act against discrimination in public accommodations, particularly in Southern urban centers, found widespread compliance. However, compliance with the sections on fair employment practices were not mandatory until July 1, 1965. Civil rights leaders pointed out that positive federal measures were required to enforce both the public accommodation and fair employment sections of the law.

PUBLIC DEMONSTRATIONS

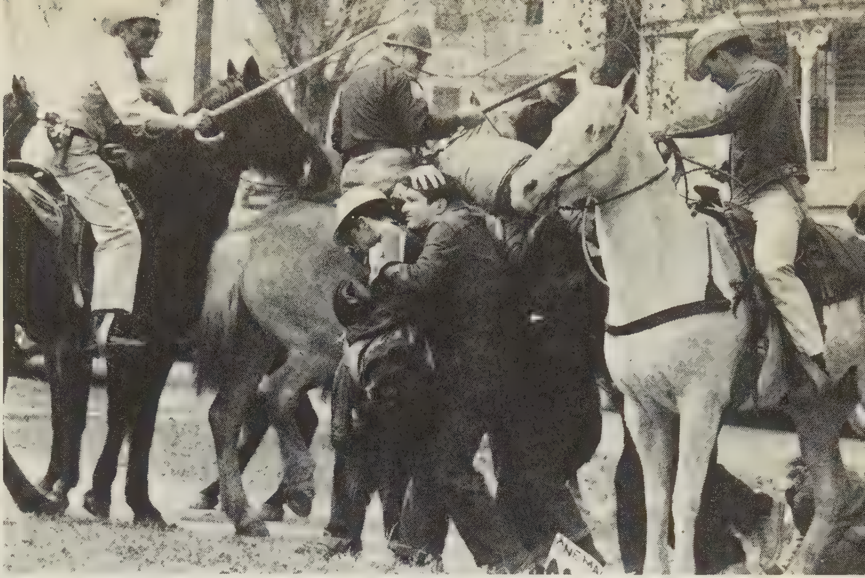
In 1965, although civil rights groups led by Martin Luther King, Roy Wilkins, James Farmer, and other leaders continued to demonstrate, there was a falling off in the number of civil rights demonstrations and riots. Also, the "white blacklash"—actions by persons and groups opposed to the Negro's attaining his civil rights—was less in evidence. Agitation for civil rights focused on a few events, particularly the Selma-to-Montgomery "freedom march" and the riots in the Watts section of Los Angeles. As expected, the trials of whites for alleged murders of participants in civil rights demonstrations ended in acquittals by Southern juries, giving added incentive to the extremists who advocate the use of force in the civil rights struggle.

Selma "Freedom March". Selma, Ala., was the primary location of Martin Luther King's campaign for voter registration. Without the dramatic impact of the Selma campaign, the Voting Rights Act of 1965 might not have become law. Selma, however, proved beyond question that the hard core of resistance to Negro voting would not be quashed by the more anemic statutes of 1957 and 1960. By early spring, after more than two months of marches and demonstrations, accompanied by arrests and the use of force by local police, only about 50 Negroes had been added to the voting lists in Selma.

Civil rights leaders, feeling that more dramatic measures had to be taken, planned a 50-mile march from Selma to the state capital at Montgomery. On March 7 ("Bloody Sunday"), state troopers broke up the march, injuring a number of participants. Eventually, however, a well-organized, peaceful march took place on March 21–25. Civil rights leaders were even more convinced that the deep South would not register Negroes unless the federal government itself intervened.

Watts Riots. The demonstration in the Watts section of Los Angeles was of a different order. It amounted to an explosive revolt in a Negro ghetto against poverty, lack of job opportunity, and alleged brutality and discriminatory tactics by the city police—the type of riot that law enforcement officials in all large U.S. cities had feared would take place in the summer of 1965. From August 11 to 14, the area was ablaze with hundreds of fires, and looting was rampant. More than 5,000 National Guardsmen were needed to restore order, and the rioting left at least 34 persons dead and over 1,000 injured. (See also LOS ANGELES.)

Murder Trials in the South. The first trial of Collie Leroy Wilkins, Jr., in Hayneville, Ala., for the murder of Mrs. Viola Liuzzo, a civil rights demonstrator who had participated in the Selma-to-Montgomery march, ended in a mistrial in May. In a retrial in



UPI

MOUNTED POSSEMEN and an Alabama state trooper wield canes and clubs as they charge into a group of civil rights demonstrators in Montgomery on March 16, five days before Martin Luther King led the Selma-Montgomery freedom march.

October, Wilkins was acquitted. At the end of September, also in Hayneville, an identical verdict was reached in the murder trial of Tom Coleman, who had been accused of killing a white theological student. But in December, an all-white jury in Anniston, Ala., found Hubert D. Strange, a white man, guilty of the July 15, 1965, slaying of Willie Brewster, a Negro. And in Hayneville, Collie Leroy Wilkins and two others were convicted of conspiracy to withhold the civil rights of Mrs. Liuzzo.

THE JUDICIARY

In the two decades since World War II, the U.S. Supreme Court has played an increasingly dominant role as the guarantor of the Bill of Rights, including its extension to the states through the 14th Amendment. In recent years, almost half of the cases heard by the Supreme Court have concerned civil liberties, and four out of five were decided in favor of the litigant. Although most of these decisions merely amplified earlier constitutional standards, a few struck out in new directions.

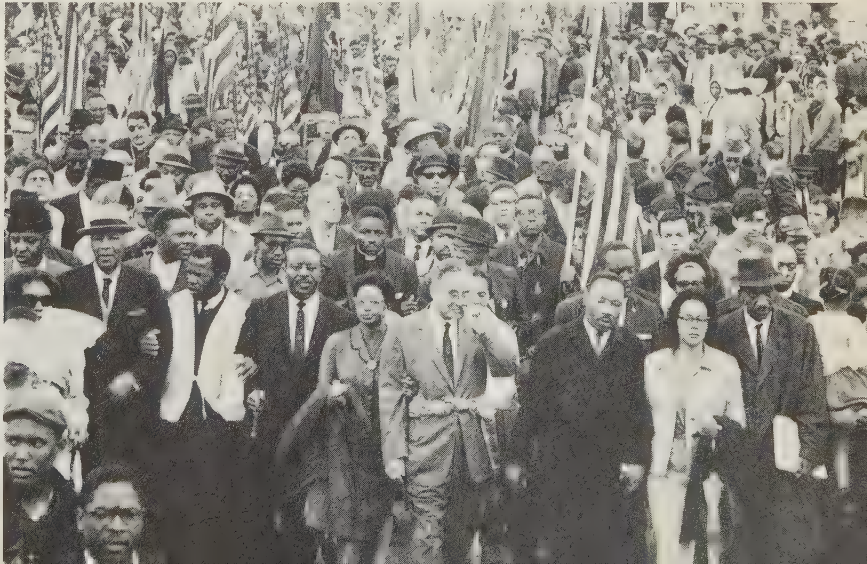
Racial Discrimination. A series of cases on racial discrimination was particularly related to the objectives of recent federal legislation. Two decisions in December 1964, *Heart of Atlanta Motel* v. *United States* and *Katzenbach* v. *McClung*, upheld Title II of the 1964 Civil Rights Act, which prohibits discrimination in places of public accommodation. In 1965 a more unusual decision was rendered in the case of *Hamm* v. *Rock Hill*, when a bare majority of the court held that the convictions of sit-in demonstrators should be reversed because the 1964 Civil Rights Act prohibited prosecutions against those who actively objected to discrimination. In *Louisiana* v. United States, the court struck down a Louisiana "understanding" test as a prerequisite for voting.

Other Cases. In another civil liberties case (*Cox* v. *Louisiana*), the court reversed convictions for picketing and breach of peace, on the ground of invasion of freedom of speech; and in *Garrison* v. *Louisiana*, it reversed a criminal libel conviction by applying the tort standard announced in 1964 in *N.Y. "Times"* v. *Sullivan*. In *Zemel* v. *Rusk*, the court found no constitutional infraction in government restrictions on travel to Cuba.

At least 16 Supreme Court cases involved criminal procedure covering such subjects as illegal searches, self-incrimination, unbiased juries, waiver of jury trial, and, in *Estes* v. *Texas*, the effect of television on a fair trial. (See also LAW; UNITED STATES; and articles on the individual states.)

RALPH F. BISCHOFF
Vice Dean, New York University School of Law

UPI



SELMA TO MONTGOMERY freedom marchers, led by Martin Luther King (front center) were joined on the 54-mile march by such dignitaries as Ralph Bunche of the United Nations (left of King). On orders from President Johnson, the march received the protection of the National Guard.

LOCHER BARELY EDGES STOKES
State Issue 1 Is Dealt Crushing Defeat
Beame Concedes Victory to Lindsay
Mayor Is Victor by 2,431 Votes In Big Turnout

WIDE WORLD

WIDE WORLD

CLEVELAND'S MAYORALTY ELECTION in 1965 was the closest the city has ever known. Ralph S. Locher (*above*) was reelected by fewer than 2,200 votes over Carl B. Stokes (*left*), Negro member of the state House of Representatives.

CLEVELAND

Cleveland (1965 est. pop.: city, 810,865; metropolitan area, 2,070,000) had the closest mayoralty election in its modern history in 1965.

Elections. In a four-man race, with some 237,000 votes cast, Ralph S. Locher was reelected mayor by a margin of less than 2,200 votes over his leading opponent, Carl B. Stokes, a Negro member of the Ohio House of Representatives; both are Democrats. Locher took the oath of office for another two-year term on November 8, although Stokes sought to delay the ceremony until the results of a recount were known. Of the 33 councilmen who were elected, 31 were Democrats. Council President James V. Stanton retained his post.

One of the reasons for Mayor Locher's near defeat was his support of a 0.6% city income tax designed to raise an estimated $18 million a year for the city's operating expenses. Voters defeated the tax measure in the May 4 primary election. The mayor also suffered from his refusal to confer with a civil rights delegation.

Industry. Industries in the Cleveland area boomed in 1965, with high rates of employment and a consequent shortage of skilled labor. In September the state Bureau of Unemployment Compensation reported that employment in the durable goods industries in the metropolitan area, which includes Cuyahoga, Lake, Geauga, and Medina counties, stood at 222,300, up 5% from the previous year. Total employment was estimated at 774,100, up 2.8%.

New Buildings and Improvements. Work continued on construction of the 32-story federal office building that is included in the downtown Erieview renewal project. Completion of the building is scheduled for September 1966. Ground was broken in the Erieview area in October 1965 for a new apartment building, the first to be constructed in the downtown area in many years.

Announcement was made of the sale of 70 acres or the 100-acre Standard Oil Company (Ohio) property, southeast of downtown Cleveland, where, in the 1860's, John D. Rockefeller and his associates started the oil-refining business that developed into the Standard Oil Company. The buyers reported that they plan to turn the acreage into a freight distribution center after the present refinery buildings have been razed.

Construction of a new campus for Cuyahoga Community College, a public two-year school opened in 1963, was cleared by passage of a county 0.6-cent tax levy expected to raise $17.5 million in five years. A $4 million street improvement bond issue also was approved, but a $6 million sewer bond issue was defeated.

Cleveland State University. The changeover of privately supported Fenn College, near downtown Cleveland, into Cleveland State University was completed in September 1965. Work began on plans for enlarging the campus area and adding buildings to accommodate thousands of additional students.

Other Events. Bishop Clarence G. Issenmann, formerly of Columbus, Ohio, was installed as coadjutor to Archbishop Edward F. Hoban and as apostolic administrator on Feb. 2, 1965. The Thompson Auto Album, an extensive collection of old automobiles and small airplanes, moved into a new $1 million wing of the Western Reserve Historical Society on East Boulevard. The Cleveland Orchestra, conducted by George Szell, made a triumphant tour of Europe in the summer of 1965.

Public Finance. Cleveland's 1965 operating budget was set at $61,091,994. The net funded debt, as of Jan. 1, 1965, amounted to $144,853,000. The city tax rate was $46.60 per $1,000 of assessed real estate valuation.

JOHN F. HUTH, JR.
Assistant General Business Editor
"The Plain Dealer"

CLOTHING

Apparel firms and allied industries continued in 1965 to make inroads into the ranks of big business. This development was achieved through diversification of products, mergers, acquisitions, and public stock issues.

Sales and Diversification. In 1965, more firms continued the trend toward multiproduct operations. Many dress companies manufactured accessories, and many men's firms added a women's line. Manufacturers having annual sales of over $10 million gradually raised their share of both total industry volume and profits. These industry giants achieved this increase to some degree by surmounting the obstacles faced by one-man businesses—inadequate capital, outmoded machinery and equipment, complete dependence on the vagaries of fashion, and competition with better-known clothing manufacturers.

The dominant styles reflected the growth in suburban population and the trend toward casual living. The emphasis also reflected the coming-of-age of postwar children, with a resultant increase in the most clothes-conscious age group. Most large firms manufactured sports and other casual wear, and junior-size and other youthful apparel, in styles neither entirely classic nor too daring, and at moderate prices.

However, small producers continued to dominate the industry in 1965. One fourth of the women's clothing and accessory producers in the United States had individual sales of less than $250,000, and two thirds had sales of less than $1 million.

Principal Markets. New York City led all principal U.S. markets in manufacturers' sales of women's and misses' unit-price dresses, coats, and suits; girls' and children's wear; and men's suits and coats. Other important centers were Los Angeles and Philadelphia (unit-price dresses); Chicago and Los Angeles (coats and suits); Philadelphia and Los Angeles (girls' wear); and Philadelphia and Chicago (men's suits and coats).

U.S. APPAREL SHIPMENTS AND PRODUCTION

	Net value of shipments (in millions)		Unit output (in millions)	
	1964	1963	1964	1963
Unit-price dresses	$1,414	$1,327.7	176	161.5
Dozen-price dresses	332	338.8	95.3	99.3
Coats and suits	790	765.5	35.4	33.5
Blouses	486	441.8	196.7	196.7
Skirts	472	453.8	113.7	113.7
Girls' and children's outerwear	...	936.3	557.1	499.5
Men's suits and tailored coats	...	843.7	24.6	24.8
Men's separate dress and sports trousers	...	660.0	127.6	116.7

Canada. The factory value of shipped men's, women's, and children's clothing was estimated at $735,400,000 in 1963, compared with an estimated $682,900,000 in 1962. The breakdown of these figures (with 1962 figures in parentheses) was: men's clothing, $326,900,000 ($300,900,000); women's clothing, $324,100,000 ($304,500,000); children's clothing, $84,400,000 ($77,500,000).

SAMUEL FEINBERG
Columnist, "Women's Wear Daily"

COAL

World output of coal rose from 2.9 billion short tons in 1963 to an estimated 3.0 billion tons in 1964—a 3.8% increase—according to the U.S. Bureau of Mines. The USSR had the largest output, but about one fourth of its total was lignite, a lower-grade product. The United States had the largest output among non-Communist countries. (See MINING for coal output of major countries.)

United States. Domestic coal production of all grades totaled 504,182,203 short tons in 1964 (16.6% of the world total). This was an increase of 26,986,644 tons over 1963. The 1964 output rose for both bituminous coal and lignite, but anthracite coal, mined only in Pennsylvania, dropped slightly.

U.S. PRODUCTION OF COAL
(In short tons)

State	1962	1963	1964
Alabama	12,879,660	12,358,962	14,435,454
Colorado	3,379,400	3,690,512	4,355,245
Illinois	48,487,362	51,736,316	55,022,602
Indiana	15,708,902	15,099,679	15,074,631
Kentucky	69,212,019	77,350,451	82,747,171
Ohio	34,124,663	36,789,830	37,310,377
Pennsylvania			
Anthracite	16,893,646	18,267,384	17,184,251
Bituminous	65,315,386	71,500,953	76,530,758
Tennessee	6,213,611	6,121,064	5,990,405
Utah	4,297,020	4,359,531	4,719,843
Virginia	29,474,323	30,530,995	31,653,484
West Virginia	118,499,067	132,567,763	141,408,498
Wyoming	2,568,724	3,124,105	3,101,314
Other	11,989,188	13,698,014	14,648,170
Total	439,042,971	477,195,559	504,182,203
Total value	$2,025,648,348	$2,168,198,130	$2,315,788,461

Source: U.S. Bureau of Mines.

At the start of the fourth week of October 1965, the year's output of bituminous coal and lignite to that date was about 404,887,000 net tons. This constituted a 3.5% increase over the 391,188,000 tons produced in the same period of 1964. Anthracite output by November 1965 was about 12,903,000 net tons, a 10.6% decrease from the 14,430,000 tons for the same period of 1964. The average price per net ton of bituminous and lignite coal increased from $4.39 in 1963 to $4.45 in 1964. Based on total production, including colliery fuel and dredge coal, the average value of Pennsylvania anthracite in 1964 was $8.64 per short ton, a gain of 3% over the 1963 price of $8.40.

The U.S. bituminous coal industry spent $800 million in 1964 on improvements and supplies, including two new types of continuous automatic underground mining machine that considerably increase production rates, and a 140-cubic-yard shovel that strips surface earth and rock away from coal seams at a rate of 210 tons in 45 to 55 seconds.

Other Countries. Seventeen countries accounted for 95.3% of the world coal output in 1964. They were: USSR, 20.1%; United States, 16.6%; Communist China, 10.5%; East Germany, 9.4%; West Germany, 9.3%; Great Britain, 7.1%; Poland, 5%; Czechoslovakia, 3.8%; India, 2.3%; France, 2%; Japan, 1.9%; Australia, 1.7%; South Africa, 1.6%; and Hungary, Yugoslavia, Bulgaria, and Belgium, about 1% each. Coal production among countries in the European Economic Community was down almost 4% in the first 9 months of 1965, as compared with the same period of 1964.

BERENICE B. MITCHELL
Supervisory Statistical Officer, Division of International Activities, U.S. Bureau of Mines

COAST GUARD, U.S.

In the year 1965 the U.S. Coast Guard continued to advance toward its traditional peacetime goals of marine safety and law enforcement. Its long-range modernization program moved ahead in all sectors, ashore and afloat. Budget funds rose from about $415 million in 1964 to over $452 million in 1965. Military personnel numbered 31,671 in 1965. Authorized civilian personnel totaled 5,332.

The Coast Guard's law-enforcement activities involved boarding and examining the papers of 138,222 vessels and reporting 45,093 violations of the Motorboat Act. Other activities included issuing 519 permits to load or discharge explosives, covering 344,568 tons of explosives; and screening 7,658 waterfront workers for security.

Other services performed by the Coast Guard in 1965 included answering 38,586 calls for assistance, involving almost $2 billion in cargo and property; towing 17,265 vessels 149,550 miles; rescuing 1,984 persons in peril; investigating 4,432 marine casualties; inspecting 5,343 vessels with a combined gross tonnage of 11,765,913; and reviewing plans for 40,641 vessels.

The Coast Guard maintained 41,778 navigation aids in the United States and elsewhere. The aids included 66 loran stations, 189 radio beacons, 7,193 day beacons, 11,084 lights (including lightships), 583 fog signals (except sound buoys), and 22,665 lighted, unlighted, and river-type buoys. Four ocean stations were maintained in the North Atlantic and two in the Pacific. These stations provided search

WIDE WORLD

COAST GUARD cutter *Coos Bay* (foreground) braves heavy seas to rescue crewmen of the British freighter *Ambassador* that sank southeast of Nova Scotia in September.

and rescue services, communication systems, air navigation facilities, and meteorological services along heavily traveled ocean routes. The Coast Guard continued its oceanographic work and aerial reconnaissance in operating the International Ice Patrol.

In 1965 the Coast Guard's surface fleet numbered 319 floating units, ranging from major cutters to small craft assigned to stations. Fixed and rotary-wing aircraft in operation in 1965 totaled 151.

The reserve strength of the Coast Guard was 3,122 officers and 26,367 enlisted personnel. The nonmilitary, voluntary Coast Guard Auxiliary was active in 826 flotillas throughout the United States. Its 23,000 members gave instruction to 137,395 persons, examined 183,002 motorboats, patrolled 2,875 regattas, and responded to 5,985 calls for assistance.

The automated Merchant Vessel Reporting System (AMVER), originally active in search and rescue work in the Atlantic Ocean, was extended to the Pacific Ocean area.

EDWIN J. ROLAND
Admiral, USCG, Commandant

COFFEE

In the 1965–66 marketing year, world coffee production recovered sharply from the unusually small crop of 1964–65. The total of 78,234,000 bags (of 132.3 pounds each) was over 50% larger than the 51,727,000-bag total of the year before, and was the largest crop since 1960. About 63,358,000 bags were for export, up from the 37,121,000 bags of the previous year.

South America continued to be the world's largest continental coffee producer, with a total output in 1965–66 of 44,733,000 bags, or more than twice as many as in 1964–65. About 35,362,000 bags were for export, or more than triple the 1964–65 level.

PRODUCTION OF GREEN COFFEE IN PRINCIPAL COUNTRIES
(No. of bags of 132.3 lbs each)

Country	Average, 1955–56 to 1959–60	1964–65	Estimate, 1965–66
Brazil	28,300,000	10,000,000	34,000,000
Colombia	7,360,000	8,000,000	8,000,000
Ivory Coast	2,130,000	3,500,000	4,800,000
Angola	1,443,000	3,200,000	3,100,000
Uganda	1,508,000	2,600,000	2,800,000
Mexico	1,716,000	2,680,000	2,950,000
Indonesia	1,343,000	2,200,000	2,000,000
El Salvador	1,436,000	2,000,000	2,100,000
Guatemala	1,357,000	1,600,000	1,900,000
Ethiopia	1,100,000	1,550,000	1,570,000
World total	58,306,000	51,727,000	78,234,000

Africa, again the second-ranking continent, produced 17,894,000 bags, or 10% more than a year earlier. The North American crop, of 11,355,000 bags, was up 9% from 1964–65.

Most of the production increase in 1965–66 was in Brazil, the world's top producing country. Brazil's crop of 34,000,000 bags was more than triple its output of 10,000,000 bags in 1964–65, when heavy frost and drought decreased the crop.

Americans used an average of about 15 pounds of coffee per person in 1965, or 2% less than the consumption of 15.3 pounds in 1964, and 4% less than the 1957–59 average. Total coffee consumption in the United States was slightly less than the 22,374,000 bags consumed in 1964.

RAY REIMAN
President, Farm Business, Inc.

COIN COLLECTING

Shiny new silver coins appeared in pocket change for the last time in 1965, as Congress and President Johnson approved a law that virtually eliminated the scarce metal from U.S. coins. On the brighter side, the coin shortage eased, and ground was broken for a new mint in Philadelphia.

New Coins. The supply of silver in the U.S. Treasury has been dwindling in recent years. As a result, Congress passed and the president signed, on July 23, the Coinage Act of 1965, which marked the first basic change in U.S. coinage since the nation's monetary system was established in 1792. The new law provided for a new dime and quarter, each with a copper core sandwiched between layers of cupronickel. The silver content of the new half dollar was reduced from 90% to 40%, with the rest copper. The design of the coins was not affected.

Quarters with the new composition were first struck on August 23 in Philadelphia, and were put into circulation on November 1. The new quarters were the only coins dated 1965 that were circulated during the 1965 calendar year. The 1964 dates had been retained on other coins released in 1965 in order to discourage hoarding. By the end of 1965, the coin shortage had been alleviated.

Production of the new dimes and half dollars began during 1965, but none was released until 1966, and all were to bear the date 1965 for the time being. Striking of cents and nickels dated 1965 also began just before the end of 1965. The "date lag" will be continued until the coin shortage ends. Production at the mint continued at a record pace in order to ensure that no coins dated 1964 or 1965 will become scarce. To further discourage hoarding, mint marks will be omitted from coins dated 1965 and thereafter.

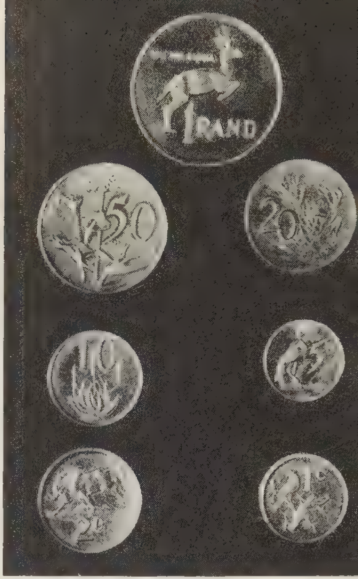
The shortage of silver and of circulating coins resulted in other disappointments for the collector. The Philadelphia Mint did not strike any proof sets during 1965, and the sale of uncirculated coins by the mint was suspended until further notice. President Johnson had ordered 45 million silver dollars to be struck in 1965, but he rescinded the order because of the silver shortage.

New Philadelphia Mint. With coins in heavy demand, more steps were taken to increase production. On September 17, ground was broken for a new mint in Philadelphia that will accommodate revolutionary high-speed minting processes. The plant is scheduled to open in July 1967. The old San Francisco Mint (closed since 1955) was pressed into use on September 1 for the striking of cents, but they bore no mint mark.

Trends in Collecting. The Canadian Mint was swamped with 6 million orders for 1965 Canadian proof sets (six coins, 1 cent to $1, face value $1.91) bearing the new mature portrait of Queen Elizabeth II. On Jan. 2, 1965, the first day that orders were accepted, they were also cut off. More than 4 million orders were returned, triggering a speculative boom that boosted the price quotations per set from $4 to $18 within a month. As a result, the mint resumed production, using expanded facilities to fill all orders.

In recent years, speculation had resulted in steep advances in the prices of recent U.S. uncirculated and proof coins, most of which—paradoxically—existed in vast quantities. The collapse of the boom in 1965 caught speculators hoarding bags of coins. Values in some older U.S. series declined to a lesser degree. Many collectors welcomed the end of the speculative frenzy.

Foreign coins became more popular with U.S. collectors. Britain struck a crown honoring the late Sir Winston Churchill, the first commoner to appear on a British coin in more than 2,000 years. Other commemoratives included two coins by India honoring the late Prime Minister Jawaharlal Nehru, and coins from the Soviet Union and Czechoslovakia marking the 20th anniversary of the end of World War II.



NEW COINS issued in 1965 included South African currency made of bronze and nickel. Silver was omitted to head off a coin shortage. The springbok, South Africa's national symbol, appears on the rand. Other coins are the 50, 20, 10, 5, 2, and 1 cent pieces.

SOUTH AFRICA INFORMATION SERVICE

The first Australian decimal coins were released early in 1966. South Africa omitted silver from its new coins. Other new releases came from many countries in 1965, with new African nations accounting for much of the increment.

Thefts. The theft of coins continued to plague private institutions, individual collectors, and coin dealers. On May 29, thieves stole 4,000 coins, including an extremely rare Brasher Doubloon, from the collection of Yale University. The university placed a value of more than $980,000 on the coins. A Chicago coin dealer was later arrested in connection with the robbery, and indicted on a charge of interstate transportation of stolen property.

ANA Site Chosen. The American Numismatic Association in 1965 announced that its new home and headquarters would be built at Colorado Springs, Colo. Omaha, Nebr., the ANA's first choice, was abandoned when the available site proved to be too small.

Hillel Kaslove
The American Numismatic Society

COLLEGES AND UNIVERSITIES

A selected list of accredited junior colleges, senior colleges, and universities in the United States, Puerto Rico, the Canal Zone, Guam, and Canada appears on pages 184–197. This list includes schools of higher education which had an enrollment of 200 or more students during the 1963–64 academic year.

The information given for each school comprises the following data: its degree-granting status (if it is a senior college or a university); the composition of its student body; the legal controlling body of each institution; and the total enrollment of students of college grade as reported by the registrar for 1963–64.

All of the American institutions listed are officially recognized by the U.S. Office of Education in its *Education Directory*, Part 3, Higher Education. Canadian colleges and universities listed are accredited by the province in which they are located.

For a discussion of educational developments during 1965, see Education.

MAJOR COLLEGES AND UNIVERSITIES, U.S. AND CANADA

Note: Symbols and abbreviations that follow the name of each school listed are as follows: *Level of Instruction*—(1) 2-year junior college; (2) senior college granting bachelor's and/or first professional degree; (3) senior college granting master's and/or second professional degree; (4) college or university offering a doctoral program. *Student Body*—(M) men only; (W) women only; (Coed) coeducational; (Coord) separate colleges for men and women. *Control*—(Public) district, municipal, state, or federal; (Private) proprietary, corporation, or church. *Enrollment*—All students of college grade for the academic year 1963-64, excepting correspondence course students.

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Abilene Christian College, Abilene, Texas	3	Coed	Private	2,753
Abraham Baldwin Agricultural College, Tifton, Ga	1	Coed	Public	692
Acadia University, Wolfville, Nova Scotia	3	Coed	Pvt-Baptist	1,267
Adams State College, Alamosa, Colo	3	Coed	Public	1,783
Adelphi University, Garden City, N.Y.	4	Coed	Private	6,995
Adrian College, Adrian, Mich	2	Coed	Pvt-Methodist	1,133
Agnes Scott College, Decatur, Ga	2	W	Private	699
Air Force Institute of Technology, Wright-Patterson AFB, Ohio	3	M	Public	729
Akron, University of, Akron, Ohio	4	Coed	Public	7,664
Alabama, University of, University, Ala	4	Coed	Public	9,671
Alabama Agricultural and Mechanical College, Normal, Ala	3	Coed	Public	1,222
Alabama College, Montevallo, Ala	3	Coed	Public	1,338
Alaska, University of, College, Alaska (incl. community colleges at Anchorage, Juneau, Ketchikan, Palmer, Sitka)	4	Coed	Public	3,949
Alaska Methodist University, Anchorage, Alaska	2	Coed	Pvt-Methodist	316
Albany State College, Albany, Ga	2	Coed	Public	1,036
Alberta, University of, Edmonton & Calgary, Alta	4	Coed	Public	10,690
Albertus Magnus College, New Haven, Conn	2	W	Pvt-Roman Catholic	490
Albion College, Albion, Mich	3	Coed	Pvt-Methodist	1,356
Albright College, Reading, Pa	2	Coed	Pvt-Brethren	1,214
Alcorn Agricultural & Mechanical College, Lorman, Miss	2	Coed	Public	1,491
Alderson-Broaddus College, Philippi, W.Va	2	Coed	Pvt-Baptist	506
Alfred University, Alfred, N.Y	4	Coed	Public-Private	1,511
Alice Lloyd College, Pippa Passes, Ky	1	Coed	Private	256
Allan Hancock College, Santa Maria, Calif	1	Coed	Public	2,580
Allegheny College, Meadville, Pa	3	Coed	Private	1,419
Alliance College, Cambridge Springs, Pa	2	Coord	Private	260
Alma College, Alma, Mich	2	Coed	Pvt-Presbyterian	911
Alpena Community College, Alpena, Mich	1	Coed	Public	473
Alverno College, Milwaukee, Wis	2	W	Pvt-Roman Catholic	1,274
Alvin Junior College, Alvin, Texas	1	Coed	Public	980
Amarillo College, Amarillo, Texas	1	Coed	Public	2,169
American Conservatory of Music, Chicago, Ill	3	Coed	Private	372
American International College, Springfield, Mass	3	Coed	Private	3,267
American River Junior College, Sacramento, Calif	1	Coed	Public	4,600
American University, The, Washington, D.C	4	Coed	Pvt-Methodist	10,076
Amherst College, Amherst, Mass	3	M	Private	1,080
Anderson College, Anderson, Ind	2	Coed	Pvt-Church of God	1,179
Anderson College, Anderson, S.C	1	Coed	Pvt-Baptist	625
Andover Newton Theological School, Newton Center, Mass	3	Coed	Private	309
Andrew College, Cuthbert, Ga	1	Coed	Pvt-Methodist	315
Andrews University, Berrien Springs, Mich	3	Coed	Pvt-Seventh-day Adventist	1,685
Anna Maria College for Women, Paxton, Mass	2	W	Pvt-Roman Catholic	546
Annhurst College, South Woodstock, Conn	2	W	Pvt-Roman Catholic	259
Antelope Valley Junior College, Lancaster, Calif	1	Coed	Public	2,801
Antioch College, Yellow Springs, Ohio	3	Coed	Private	1,614
Appalachian State Teachers College, Boone, N.C	3	Coed	Public	3,430
Aquinas College, Grand Rapids, Mich	3	Coed	Pvt-Roman Catholic	1,237
Arizona, University of, Tucson, Ariz	4	Coed	Public	18,083
Arizona State College, Flagstaff, Ariz	3	Coed	Public	3,977
Arizona State University, Tempe, Ariz	4	Coed	Public	17,046
Arkansas, University of, Fayetteville, Ark	4	Coed	Public	8,721
Arkansas Agricultural, Mechanical, & Normal College, Pine Bluff, Ark	2	Coed	Public	2,183
Arkansas Agricultural & Mechanical College, College Heights, Ark	2	Coed	Public	1,178
Arkansas College, Batesville, Ark	2	Coed	Pvt-Presbyterian	294
Arkansas Polytechnic College, Russellville, Ark	2	Coed	Public	1,636
Arkansas State College, State College, Ark	3	Coed	Public	4,160
Arkansas State Teachers College, Conway, Ark	3	Coed	Public	2,394
Arlington State College, Arlington, Texas	2	Coed	Public	10,025
Armstrong College of Savannah, Ga	1	Coed	Public	774
Armstrong Schools of Business, Berkeley, Calif	3	Coed	Private	500
Art Center School, The, Los Angeles, Calif	3	Coed	Private	1,122
Art Institute of Chicago, School of the, Chicago, Ill	3	Coed	Private	2,434
Asbury College, Wilmore, Ky	2	Coed	Private	963
Asbury Theological Seminary, Wilmore, Ky	3	Coed	Private	253
Asheville-Biltmore College, Asheville, N.C	1	Coed	Public	502
Ashland College, Ashland, Ohio	2	Coed	Pvt-Brethren	1,348
Assumption College, Worcester, Mass	3	M	Pvt-Roman Catholic	776
Athenaeum of Ohio, Cincinnati, Ohio	3	M	Pvt-Roman Catholic	521
Athens College, Athens, Ala	2	Coed	Pvt-Methodist	663
Atlanta University, Atlanta, Ga	3	Coed	Private	598
Atlantic Christian College, Wilson, N.C	2	Coed	Pvt-Disciples of Christ	1,325
Atlantic Union College, South Lancaster, Mass	2	Coed	Pvt-Seventh-day Adventist	577
Auburn University, Auburn, Ala	4	Coed	Public	9,819
Augsburg College, Minneapolis, Minn	2	Coed	Pvt-Lutheran	1,175
Augusta College, Augusta, Ga	1	Coed	Public	1,204
Augustana College, Rock Island, Ill	2	Coed	Pvt-Lutheran	1,558
Augustana College, Sioux Falls, S.Dak	2	Coed	Pvt-Lutheran	1,686
Aurora College, Aurora, Ill	2	Coed	Pvt-Adventist Christian	1,053
Austin College, Sherman, Texas	3	Coed	Pvt-Presbyterian	1,098
Austin Peay State College, Clarksville, Tenn	3	Coed	Public	2,223
Averett College, Danville, Va	1	W	Pvt-Baptist	428
Avila College, Kansas City, Mo	2	W	Pvt-Roman Catholic	452
Azusa College, Azusa, Calif	2	Coed	Private	223
Babson Institute of Business Administration, Babson Park, Mass	3	M	Private	884
Baker University, Baldwin City, Kans	2	Coed	Pvt-Methodist	733
Bakersfield College, Bakersfield, Calif	1	Coed	Public	5,530
Baldwin-Wallace College, Berea, Ohio	2	Coed	Pvt-Methodist	2,420
Ball State Teachers College, Muncie, Ind	4	Coed	Public	8,921
Baltimore College of Commerce, Baltimore, Md	2	Coed	Pvt-YMCA	798
Baltimore Junior College, Baltimore, Md	1	Coed	Public	1,520
Bank Street College of Education, New York, N.Y	3	Coed	Private	534
Barat College of the Sacred Heart, Lake Forest, Ill	2	W	Pvt-Roman Catholic	444
Barber-Scotia College, Concord, N.C	2	Coed	Pvt-Presbyterian	315
Bard College, Annandale-on-Hudson, N.Y	2	Coed	Private	482
Barnard College (of Columbia University), New York, N.Y	2	W	Private	...[1]
Barrington College, Barrington, R.I	2	Coed	Private	432

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Barry College, Miami, Fla	3	W	Pvt-Roman Catholic	848
Barstow College, Barstow, Calif	1	Coed	Public	444
Bates College, Lewiston, Me	2	Coed	Private	891
Baylor University, Waco, Texas	4	Coed	Pvt-Baptist	6,495
Beaver College, Glenside, Pa	2	W	Pvt-Presbyterian	705
Becker Junior College, Worcester, Mass	1	Coed	Private	610
Belhaven College, Jackson, Miss	3	Coed	Pvt-Presbyterian	421
Bellarmine College, Louisville, Ky	2	M	Pvt-Roman Catholic	1,526
Belleville Junior College, Belleville, Ill	1	Coed	Public	2,701
Belmont Abbey College, Belmont, N.C	2	M	Pvt-Roman Catholic	618
Belmont College, Nashville, Tenn	2	Coed	Pvt-Baptist	696
Beloit College, Beloit, Wis	3	Coed	Private	1,081
Bemidji State College, Bemidji, Minn	3	Coed	Public	2,525
Benedict College, Columbia, S.C	2	Coed	Pvt-Baptist	1,061
Bennett College, Millbrook, N.Y	1	W	Private	331
Bennett College, Greensboro, N.C	2	W	Pvt-Methodist	589
Bennington College, Bennington, Vt	2	W	Private	379
Berea College, Berea, Ky	2	Coed	Private	1,350
Berkshire Community College, Pittsfield, Mass	1	Coed	Public	358
Berry College, Mount Berry, Ga	2	Coed	Private	848
Bethany Bible College, Santa Cruz, Calif	2	Coed	Pvt-Assemblies of God	350
Bethany College, Lindsborg, Kans	2	Coed	Pvt-Lutheran	994
Bethany College, Bethany, W.Va	2	Coed	Private	850
Bethany-Nazarene College, Bethany, Okla	2	Coed	Pvt-Nazarene	1,224
Bethel College, North Newton, Kans	2	Coed	Pvt-Mennonite	475
Bethel College, McKenzie, Tenn	2	Coed	Pvt-Presbyterian	535
Bethel College & Seminary, St. Paul, Minn	2	Coed	Pvt-Baptist	911
Bethune-Cookman College, Daytona Beach, Fla	2	Coed	Private	831
Biola College, La Mirada, Calif	2	Coed	Private	1,180
Birmingham-Southern College, Birmingham, Ala	3	Coed	Pvt-Methodist	892
Bishop College, Dallas, Texas	2	Coed	Pvt-Baptist	940
Bishop's University, Lennoxville, Quebec	3	Coed	Pvt-Anglican	562
Black Hawk College, Moline, Ill	1	Coed	Public	1,706
Black Hills State College, Spearfish, S.Dak	3	Coed	Public	1,334
Blackburn College, Carlinville, Ill	2	Coed	Private	420
Blinn College, Brenham, Texas	1	Coed	Public	689
Bliss College, Columbus, Ohio	2	Coed	Private	293
Bloomfield College, Bloomfield, N.J	2	Coed	Pvt-Presbyterian	1,077
Bloomsburg State College, Bloomsburg, Pa	3	Coed	Public	2,293
Blue Mountain College, Blue Mountain, Miss	2	W	Pvt-Baptist	269
Bluefield College, Bluefield, Va	1	Coed	Pvt-Baptist	334
Bluefield State College, Bluefield, W.Va	2	Coed	Public	816
Bluffton College, Bluffton, Ohio	2	Coed	Pvt-Mennonite	544
Boise Junior College, Boise, Idaho	1	Coed	Public	2,410
Borromeo Seminary of Ohio, Wickliffe, Ohio	2	M	Pvt-Roman Catholic	205
Boston College, Chestnut Hill, Mass	4	Coed	Pvt-Roman Catholic	8,828
Boston Conservatory of Music, Boston, Mass	3	Coed	Private	239
Boston University, Boston, Mass	4	Coed	Private	19,628
Bowdoin College, Brunswick, Me	3	M	Private	806
Bowie State College, Bowie, Md	2	Coed	Public	435
Bowling Green State University, Bowling Green, Ohio	3	Coed	Public	9,185
Bradford Durfee College of Technology, Fall River, Mass	2	Coed	Public	684
Bradford Junior College, Bradford, Mass	1	W	Private	345
Bradley University, Peoria, Ill	3	Coed	Private	5,290
Brandeis University, Waltham, Mass	4	Coed	Private	1,893
Brandon College (of the University of Manitoba), Brandon, Man	2	Coed	Private	419
Brenau College, Gainesville, Ga	2	W	Private	556
Brescia College, Owensboro, Ky	2	Coed	Pvt-Roman Catholic	929
Brevard College, Brevard, N.C	1	Coed	Pvt-Methodist	409
Brevard Engineering College, Melbourne, Fla	3	Coed	Private	800
Brewton-Parker College, Mount Vernon, Ga	1	Coed	Pvt-Baptist	375
Briar Cliff College, Sioux City, Iowa	2	W	Pvt-Roman Catholic	634

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Briarcliff College, Briarcliff Manor, N.Y	1	W	Private	428
Bridgeport, University of, Bridgeport, Conn	3	Coed	Private	7,039
Bridgewater College, Bridgewater, Va	2	Coed	Pvt-Brethren	653
Brigham Young University, Provo, Utah	4	Coed	Pvt-Latter-day Saints	15,394
British Columbia, University of, Vancouver, B.C	4	Coed	Public	14,392
Bronx Community College (of the City University of New York), Bronx, N.Y	1	Coed	Public	1,134
Brooklyn, Polytechnic Institute of, Brooklyn, N.Y	4	M	Private	5,663
Brooklyn College (of the City University of New York), Brooklyn, N.Y	3	Coed	Public	21,228
Brooklyn Law School, Brooklyn, N.Y	3	Coed	Private	1,196
Brown University, Providence, R.I. (incl. Pembroke College)	4	Coord	Private	4,451
Bryant College, Providence, R.I	2	Coed	Private	1,574
Bryn Mawr College, Bryn Mawr, Pa	4	W	Private	991
Bucknell University, Lewisburg, Pa	3	Coed	Private	2,666
Buena Vista College, Storm Lake, Iowa	2	Coed	Pvt-Presbyterian	932
Burdett College, Boston, Mass	1	Coed	Private	1,235
Burlington Community College, Burlington, Iowa	1	Coed	Public	448
Butler University, Indianapolis, Ind	3	Coed	Private	4,323
Cabrillo College, Aptos, Calif	1	Coed	Public	2,431
Caldwell College for Women, Caldwell, N.J	2	W	Pvt-Roman Catholic	720
California, University of, Berkeley, Los Angeles, San Francisco, Santa Barbara, Davis, Riverside, San Diego, Irvine, Santa Cruz, Calif	4	Coed	Public	99,208
California Baptist College, Riverside, Calif	2	Coed	Pvt-Baptist	455
California College of Arts & Crafts, Oakland, Calif	3	Coed	Private	741
California College of Medicine, Los Angeles, Calif	2	Coed	Private	358
California Institute of Technology, Pasadena, Calif	4	M	Private	1,375
California Institute of the Arts, Los Angeles, Calif	3	Coed	Private	406
California Lutheran College, Thousand Oaks, Calif	2	Coed	Pvt-Lutheran	561
California State College, California, Pa	3	Coed	Public	3,485
California State College at Los Angeles, Calif	3	Coed	Public	20,127
California State College at Hayward, Calif	2	Coed	Public	2,354
California State College at Fullerton, Calif	3	Coed	Public	3,941
California State Polytechnic College, San Luis Obispo & Pomona, Calif	3	Coed	Public	10,303
California Western University, San Diego, Calif	3	Coed	Pvt-Methodist	1,970
Calvary Bible College, Kansas City, Mo	2	Coed	Private	205
Calvin College, Grand Rapids, Mich	2	Coed	Pvt-Christian Reformed	2,526
Cameron State Agricultural College, Lawton, Okla	1	Coed	Public	1,630
Campbell College, Buies Creek, N.C	1	Coed	Pvt-Baptist	1,819
Campbellsville College, Campbellsville, Ky	2	Coed	Pvt-Baptist	705
Canal Zone College, Balboa Heights, C.Z	1	Coed	Public	899
Canisius College, Buffalo, N.Y	3	Coed	Pvt-Roman Catholic	3,074
Capital University, Columbus, Ohio	2	Coed	Pvt-Lutheran	1,537
Carbon College (of the University of Utah), Price, Utah	2	Coed	Public	...[2]
Cardinal Glennon College, St. Louis, Mo	2	M	Pvt-Roman Catholic	212
Cardinal Stritch College, Milwaukee, Wis	3	W	Pvt-Roman Catholic	430
Carleton College, Northfield, Minn	2	Coed	Private	1,336
Carleton University, Ottawa, Ontario	4	Coed	Private	2,221
Carnegie Institute of Technology, Pittsburgh, Pa. (incl. Margaret Morrison Carnegie College)	4	Coed	Private	5,076
Carroll College, Helena, Mont	2	Coed	Pvt-Roman Catholic	771
Carroll College, Waukesha, Wis	2	Coed	Pvt-Presbyterian	969
Carson-Newman College, Jefferson City, Tenn	2	Coed	Pvt-Baptist	1,440
Carthage College, Kenosha, Wis	2	Coed	Pvt-Lutheran	1,615
Cascade College, Portland, Oreg	2	Coed	Private	288
Case Institute of Technology, Cleveland, Ohio	4	Coed	Private	2,461
Casper College, Casper, Wyo	1	Coed	Public	938
Castleton State College, Castleton, Vt	2	Coed	Public	576
Catawba College, Salisbury, N.C	2	Coed	Pvt-Evangelical Reformed	817

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Catherine Spaulding College, Louisville, Ky	3	W	Pvt-Roman Catholic	1,394
Catholic University of America, Washington, D.C	4	Coord	Pvt-Roman Catholic	5,572
Catholic University of Puerto Rico, Ponce, P.R	2	Coed	Pvt-Roman Catholic	3,449
Cedar Crest College, Allentown, Pa	2	W	Pvt-Evangelical Reformed	490
Centenary College, Shreveport, La	2	Coed	Pvt-Methodist	1,639
Centenary College for Women, Hackettstown, N.J	1	W	Pvt-Methodist	618
Central Bible Institute, Springfield, Mo	3	Coed	Pvt-Assemblies of God	557
Central College, Pella, Iowa	2	Coed	Pvt-Episcopal	654
Central Connecticut State College, New Britain, Conn	3	Coed	Public	4,946
Central Florida Junior College, Ocala, Fla	1	Coed	Public	862
Central Methodist College, Fayette, Mo	2	Coed	Pvt-Methodist	866
Central Michigan University, Mt. Pleasant, Mich	3	Coed	Public	8,039
Central Missouri State College, Warrensburg, Mo	3	Coed	Public	6,280
Central State College, Wilberforce, Ohio	1	Coed	Public	2,200
Central State College, Edmond, Okla	3	Coed	Public	5,867
Central Washington State College, Ellensburg, Wash	3	Coed	Public	3,796
Centralia College, Centralia, Wash	1	Coed	Public	856
Centralia Junior College, Centralia, Ill	1	Coed	Public	355
Centre College of Kentucky, Danville, Ky	2	Coed	Private	573
Cerritos College, Norwalk, Calif	1	Coed	Public	3,633
Chabot College, San Leandro, Calif	1	Coed	Public	3,982
Chadron State College, Chadron, Nebr	3	Coed	Public	1,295
Chaffey College, Alta Loma, Calif	1	Coed	Public	2,132
Chaminade College of Honolulu, Hawaii	2	Coed	Pvt-Roman Catholic	393
Champlain College, Burlington, Vt	1	Coed	Private	516
Chapman College, Orange, Calif	3	Coed	Pvt-Disciples of Christ	1,388
Charleston, College of, Charleston, S.C	2	Coed	Private	469
Charlotte College, Charlotte, N.C	1	Coed	Public	1,414
Chatham College, Allentown, Pa	2	W	Private	603
Chattanooga, University of, Chattanooga, Tenn	3	Coed	Private	2,515
Chestnut Hill College, Philadelphia, Pa	2	W	Pvt-Roman Catholic	965
Cheyney State College, Cheyney, Pa	2	Coed	Public	1,020
Chicago, University of, Chicago, Ill	4	Coed	Private	8,588
Chicago City Junior College, Chicago, Ill	1	Coed	Public	25,242
Chicago College of Osteopathy, Chicago, Ill	2	Coed	Private	236
Chicago Medical School, Chicago, Ill	2	Coed	Private	267
Chicago Teachers College, Chicago, Ill	3	Coed	Public	5,232
Chicago Teachers College North, Chicago, Ill	2	Coed	Public	2,583
Chicago-Kent College of Law, Chicago, Ill	2	Coed	Private	387
Chico State College, Chico, Calif	3	Coed	Public	4,517
Chipola Junior College, Marianna, Fla	1	Coed	Public	747
Chowan College, Murfreesboro, N.C	1	Coed	Pvt-Baptist	914
Christian Brothers College, Memphis, Tenn	2	M	Pvt-Roman Catholic	768
Christian College, Columbia, Mo	1	W	Pvt-Disciples of Christ	316
Christian Theological Seminary, Indianapolis, Ind	3	Coed	Pvt-Disciples of Christ	209
Cincinnati, University of, Cincinnati, Ohio	4	Coed	Public	21,916
Cisco Junior College, Cisco, Texas	1	Coed	Public	375
Citadel, The, Charleston, S.C	2	M	Public	1,980
Citrus Junior College, Azusa, Calif	1	Coed	Public	3,042
City College (of the City University of New York), New York, N.Y	3	Coord	Public	32,435
Claflin College, Orangeburg, S.C	2	Coed	Pvt-Methodist	482
Claremont Graduate School & University Center, Claremont, Calif	4	Coed	Private	789
Claremont Men's College, Claremont, Calif	2	M	Private	554
Clarion State College, Clarion, Pa	2	Coed	Public	2,602
Clark College, Atlanta, Ga	2	Coed	Pvt-Methodist	777
Clark College, Vancouver, Wash	1	Coed	Public	1,837
Clark University, Worcester, Mass	4	Coed	Private	2,158
Clarke College, Dubuque, Iowa	2	W	Pvt-Roman Catholic	884
Clarke Memorial College, Newton, Miss	1	Coed	Pvt-Baptist	293
Clarkson College of Technology, Potsdam, N.Y	4	M	Private	1,643
Clemson University, Clemson, S.C	4	Coed	Public	4,576
Cleveland-Marshall Law School, Cleveland, Ohio	3	Coed	Private	518
Coalinga College, Coalinga, Calif	1	Coed	Public	781
Coe College, Cedar Rapids, Iowa	2	Coed	Private	1,165
Coker College, Hartsville, S.C	2	W	Private	350
Colby College, Waterville, Me	2	Coord	Private	1,264
Colby Junior College for Women, New London, N.H	2	W	Private	549
Colgate University, Hamilton, N.Y	3	M	Private	1,481
Colorado, University of, Boulder, Colo	4	Coed	Public	19,950
Colorado College, Colorado Springs, Colo	3	Coed	Private	1,389
Colorado School of Mines, Golden, Colo	4	Coed	Public	1,118
Colorado State College, Greeley, Colo	4	Coed	Public	5,230
Colorado State University, Fort Collins, Colo	4	Coed	Public	8,452
Colorado Woman's College, Denver, Colo	2	W	Pvt-Baptist	774
Columbia Basin College, Pasco, Wash	1	Coed	Public	2,475
Columbia Bible College, Columbia, S.C	3	Coed	Private	486
Columbia College, Columbia, S.C	2	W	Pvt-Methodist	891
Columbia Theological Seminary, Decatur, Ga	3	M	Pvt. Presbyterian	247
Columbia Union College, Takoma Park, Md	2	Coed	Pvt-Seventh-day Adventist	948
Columbia University, New York, N.Y. (incl. Barnard and Columbia University Teachers colleges, qq.v., Columbia College, New York School of Social Work)	4	Coed	Private	24,801
Columbia University Teachers College, New York, N.Y	4	Coed	Private	...[1]
Columbus College, Columbus, Ga	1	Coed	Public	732
Compton District Junior College, Compton, Calif	1	Coed	Public	4,606
Concord College, Athens, W.Va	2	Coed	Public	1,688
Concordia College, Moorhead, Minn	2	Coed	Pvt-Lutheran	1,725
Concordia College, St. Paul, Minn	1	Coed	Pvt-Lutheran	471
Concordia Junior College, Bronxville, N.Y	1	Coed	Pvt-Lutheran	293
Concordia Seminary, St. Louis, Mo	4	Coord	Pvt-Lutheran	639
Concordia Senior College, Fort Wayne, Ind	2	M	Pvt-Lutheran	471
Concordia Teachers College, River Forest, Ill	3	Coed	Pvt-Lutheran	1,158
Concordia Teachers College, Seward, Nebr	2	Coed	Pvt-Lutheran	1,023
Connecticut, University of, Storrs, Conn	4	Coed	Public	13,523
Connecticut College, New London, Conn	3	W	Private	1,487
Connors State Agricultural College, Warner, Okla	1	Coed	Public	514
Contra Costa College, San Pablo, Calif	1	Coed	Public	4,771
Converse College, Spartanburg, S.C	3	W	Private	697
Cooke County Junior College, Gainesville, Texas	1	Coed	Public	575
Cooper Union, New York, N.Y	2	Coed	Private	1,269
Copiah-Lincoln Junior College, Wesson, Miss	1	Coed	Public	379
Coppin State College, Baltimore, Md	2	Coed	Private	377
Cornell College, Mount Vernon, Iowa	2	Coed	Private	867
Cornell University, Ithaca, N.Y	4	Coed	Public-Private	13,131
Corning Community College, Corning, N.Y	1	Coed	Public	384
Cottey College, Nevada, Mo	1	W	Private	369
Creighton University, Omaha, Nebr	3	Coed	Pvt-Roman Catholic	3,568
Culver-Stockton College, Canton, Mo	2	Coed	Pvt-Disciples of Christ	694
Cumberland College, Williamsburg, Ky	2	Coed	Pvt-Baptist	1,117
Dakota Wesleyan University, Mitchell, S.Dak	2	Coed	Pvt-Methodist	593
Dalhousie University, Halifax, Nova Scotia (incl. University of King's College)	3	Coed	Private	2,697
Dallas, University of, Dallas, Texas	2	Coed	Pvt-Roman Catholic	622
Dana College, Blair, Nebr	2	Coed	Pvt-Lutheran	648
Danbury State College, Danbury, Conn	3	Coed	Public	1,610
Daniel Payne College, Birmingham, Ala	4	Coed	Pvt-Methodist Episcopal	312
Dartmouth College, Hanover, N.H	4	M	Private	3,453
David Lipscomb College, Nashville, Tenn	2	Coed	Pvt-Church of Christ	1,463
Davidson College, Davidson, N.C	2	M	Pvt-Presbyterian	1,000
Davis and Elkins College, Elkins, W.Va	2	Coed	Pvt-Presbyterian	526
Dayton, University of, Dayton, Ohio	3	Coed	Pvt-Roman Catholic	7,222
Daytona Beach Junior College, Daytona Beach, Fla	1	Coed	Public	1,350
Dean Junior College, Franklin, Mass	1	Coed	Private	689

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Defiance College, Defiance, Ohio	2	Coed	Private	823
Delaware, University of, Newark, Del	4	Coed	Public	8,217
Delaware State College, Dover, Del	2	Coed	Public	680
Delaware Valley College of Science & Agriculture, Doylestown, Pa	2	M	Private	517
Del Mar College, Corpus Christi, Texas	1	Coed	Public	2,696
Delta State College, Cleveland, Miss	2	Coed	Public	1,469
Denison University, Granville, Ohio	2	Coed	Private	1,630
Denver, University of, Denver, Colo	4	Coed	Pvt-Methodist	6,519
De Paul University, Chicago, Ill	3	Coed	Pvt-Roman Catholic	8,716
DePauw University, Greencastle, Ind	3	Coed	Private	2,317
Desert, College of the, Palm Desert, Calif	1	Coed	Public	788
Detroit, University of, Detroit, Mich	3	Coed	Pvt-Roman Catholic	9,570
Detroit Bible College, Detroit, Mich	2	Coed	Private	253
Detroit College of Law, Detroit, Mich	2	Coed	Private	574
Detroit Institute of Technology, Detroit, Mich	2	Coord	Private	2,370
Diablo Valley College, Concord, Calif	1	Coed	Public	6,800
Dickinson College, Carlisle, Pa	2	Coed	Private	1,175
Dickinson School of Law, Carlisle, Pa	2	Coed	Private	251
Dillard University, New Orleans, La	2	Coed	Private	868
District of Columbia Teachers College, Washington, D.C	2	Coed	Public	2,205
Dixie Junior College, St. George, Utah	1	Coed	Public	383
Doane College, Crete, Nebr	1	Coed	Pvt-United Church	356
Dominican College, Racine, Wis	2	Coed	Pvt-Roman Catholic	576
Dominican College of San Rafael, Calif	3	W	Pvt-Roman Catholic	792
Donnelly College, Kansas City, Kans	1	Coed	Pvt-Roman Catholic	650
Douglass College (of Rutgers University), New Brunswick, N.J	2	W	Public	...[3]
Drake University, Des Moines, Iowa	3	Coed	Private	7,597
Drew University, Madison, N.J	4	Coed	Pvt-Methodist	1,243
Drexel Institute of Technology, Philadelphia, Pa	3	Coed	Private	8,418
Drury College, Springfield, Mo	3	Coed	Pvt-Congregational	1,192
Dubuque, University of, Dubuque, Iowa	2	Coed	Pvt-Presbyterian	874
Duchesne College of the Sacred Heart, Omaha, Nebr	2	W	Pvt-Roman Catholic	364
Duke University, Dunham, N.C. (incl. Trinity College & Woman's College)	4	Coord	Private	6,360
Dunbarton College of Holy Cross, Washington, D.C	2	W	Pvt-Roman Catholic	472
Duquesne University, Pittsburgh, Pa	4	Coed	Pvt-Roman Catholic	6,632
Dutchess Community College, Poughkeepsie, N.Y	1	Coed	Public	482
Dyke College, Cleveland, Ohio	2	Coed	Private	983
D'Youville College, Buffalo, N.Y	2	W	Pvt-Roman Catholic	863
Earlham College, Richmond, Ind	3	Coed	Pvt-Friends	1,100
East Carolina College, Greenville, N.C	3	Coed	Public	7,604
East Central Junior College, Decatur, Miss	1	Coed	Public	438
East Central State College, Ada, Okla	3	Coed	Public	2,028
East Los Angeles College, Los Angeles, Calif	1	Coed	Public	7,570
East Mississippi Junior College, Scooba, Miss	1	Coed	Public	280
East Stroudsburg State College, East Stroudsburg, Pa	3	Coed	Public	1,910
East Tennessee State University, Johnson City, Tenn	3	Coed	Public	6,201
East Texas Baptist College, Marshall, Texas	2	Coed	Pvt-Baptist	557
East Texas State College, Commerce, Texas	4	Coed	Public	4,900
Eastern Baptist College, St. Davids, Pa	2	Coed	Pvt-Baptist	422
Eastern College, Mt. Vernon, Md	2	Coed	Private	814
Eastern Illinois University, Charleston, Ill	3	Coed	Public	4,044
Eastern Kentucky State College, Richmond, Ky	3	Coed	Public	5,220
Eastern Mennonite College, Harrisonburg, Va	2	Coed	Pvt-Mennonite	668
Eastern Michigan University, Ypsilanti, Mich	3	Coed	Public	9,224
Eastern Montana College of Education, Billings, Mont	3	Coed	Public	1,916
Eastern Nazarene College, Wollaston, Mass	2	Coed	Pvt-Nazarene	711
Eastern New Mexico University, Portales, N.Mex	3	Coed	Public	3,522
Eastern Oklahoma Agricultural & Mechanical College, Wilburton, Okla	1	Coed	Public	727
Eastern Oregon College, La Grande, Oreg	3	Coed	Public	1,151
Eastern Washington State College, Cheney, Wash	3	Coed	Public	3,687
Edgewood College of the Sacred Heart, Madison, Wis	2	W	Pvt-Roman Catholic	576
Edinboro State College, Edinboro, Pa	3	Coed	Public	2,414
El Camino College, El Camino College, Calif	1	Coed	Public	12,782
Elizabeth City State College, Elizabeth City, N.C	2	Coed	Public	837
Elizabethtown College, Elizabethtown, Pa	2	Coed	Pvt-Brethren	1,570
Ellsworth Junior College, Iowa Falls, Iowa	1	Coed	Public	470
Elmhurst College, Elmhurst, Ill	2	Coed	Pvt-Evangelical Reformed	1,841
Elmira College, Elmira, N.Y	3	W	Private	1,805
Elon College, Elon College, N.C	2	Coed	Private	1,248
Emerson College, Boston, Mass	3	Coed	Private	758
Emmanuel College, Boston, Mass	2	W	Pvt-Roman Catholic	1,187
Emory & Henry College, Emory, Va	2	Coed	Pvt-Methodist	838
Emory University, Atlanta & Oxford, Ga	4	Coed	Pvt-Methodist	4,737
Emporia, College of, Emporia, Kans	2	Coed	Pvt-Presbyterian	649
Endicott Junior College, Beverly, Mass	1	W	Private	679
Erskine College, Due West, S.C	2	Coed	Pvt-Presbyterian	711
Eureka College, Eureka, Ill	2	Coed	Pvt-Disciples of Christ	321
Evangelical Lutheran Theological Seminary, Columbus, Ohio	2	M	Pvt-Lutheran	237
Evansville College, Evansville, Ind	2	Coed	Private	3,264
Everett Junior College, Everett, Wash	1	Coed	Public	3,550
Fairfield University, Fairfield, Conn	3	M	Pvt-Roman Catholic	2,094
Fairleigh Dickinson University, Rutherford, Teaneck, Madison, N.J	3	Coed	Private	15,912
Fairmont State College, Fairmont, W.Va	2	Coed	Public	1,475
Farmington State Teachers College, Farmington, Me	2	Coed	Public	531
Fashion Institute of Technology, New York, N.Y	1	Coed	Public	3,861
Fayetteville State College, Fayetteville, N.C	2	Coed	Public	1,013
Fenn College, Cleveland, Ohio	2	Coed	Private	5,470
Ferris State College, Big Rapids, Mich	2	Coed	Public	3,983
Ferrum Junior College, Ferrum, Va	1	Coed	Pvt-Methodist	688
Finch College, New York, N.Y	2	W	Private	300
Findlay College, Findlay, Ohio	2	Coed	Pvt-Church of God	934
Fisher Junior College, Boston, Mass	1	W	Private	396
Fisk University, Nashville, Tenn	3	Coed	Private	923
Flint Community Junior College, Flint, Mich	1	Coed	Public	3,804
Florence State College, Florence, Ala	3	Coed	Public	2,007
Florida, University of, Gainesville, Fla	4	Coed	Public	14,801
Florida Agricultural & Mechanical University, Tallahassee, Fla	3	Coed	Public	2,884
Florida College, Temple Terrace, Fla	1	Coed	Private	288
Florida Memorial College, St. Augustine, Fla	2	Coed	Private	377
Florida Southern College, Lakeland, Fla	2	Coed	Pvt-Methodist	2,447
Florida State University, Tallahassee, Fla	4	Coed	Public	11,162
Fontbonne College, St. Louis, Mo	2	W	Pvt-Roman Catholic	803
Foothill College, Los Altos Hills, Calif	1	Coed	Public	6,238
Fordham University, New York, N.Y	4	Coed	Pvt-Roman Catholic	8,895
Fort Hays Kansas State College, Hays, Kans	3	Coed	Public	3,948
Fort Lewis College, Durango, Colo	1	Coed	Public	988
Fort Valley State College, Fort Valley, Ga	3	Coed	Public	1,246
Fort Wayne Bible College, Fort Wayne, Ind	2	Coed	Private	408
Fort Wright College of the Holy Names, Spokane, Wash	2	W	Pvt-Roman Catholic	463
Francis T. Nicholls State College, Thibodaux, La	2	Coed	Public	1,542
Frank Phillips College, Borger, Texas	1	Coed	Public	615
Franklin & Marshall College, Lancaster, Pa	3	M	Private	1,926
Franklin College of Indiana, Franklin, Ind	2	Coed	Pvt-Baptist	584
Franklin University, Columbus, Ohio	2	Coed	Pvt-YMCA	878
Free Will Baptist Bible College, Nashville, Tenn	2	Coed	Pvt-Baptist	229
Freed-Hardeman College, Henderson, Tenn	1	Coed	Private	526
Fresno City College, Fresno, Calif	1	Coed	Public	3,104

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Fresno State College, Fresno, Calif	3	Coed	Public	9,123
Friends University, Wichita, Kans	2	Coed	Pvt-Friends	571
Frostburg State College, Frostburg, Md	3	Coed	Public	1,834
Fuller Theological Seminary, Pasadena, Calif	3	Coed	Private	290
Fullerton Junior College, Fullerton, Calif	1	Coed	Public	7,068
Furman University, Greenville, S.C	3	Coed	Pvt-Baptist	1,506
Gallaudet College, Washington, D.C	3	Coed	Private	457
Gannon College, Erie, Pa	2	M	Pvt-Roman Catholic	2,096
Gardner-Webb Junior College, Boiling Springs, N.C	1	Coed	Pvt-Baptist	686
Garland Junior College, Boston, Mass	1	W	Private	315
Garrett Biblical Institute, Evanston, Ill	4	Coed	Pvt-Methodist	354
Gavilan College, Gilroy, Calif	1	Coed	Public	281
General Beadle State College, Madison, S.Dak	2	Coed	Public	603
General Motors Institute, Flint, Mich	2	M	Private	2,541
General Theological Seminary, New York, N.Y	4	M	Pvt-Protestant Episcopal	200
Geneva College, Beaver Falls, Pa	2	Coed	Pvt-Presbyterian	1,692
George Fox College, Newberg, Oreg	2	Coed	Pvt-Friends	295
George Peabody College for Teachers, Nashville, Tenn	4	Coed	Private	1,923
George Washington University, Washington, D.C	4	Coed	Private	16,211
George Williams College, Chicago, Ill	3	Coed	Private	491
Georgetown College, Georgetown, Ky	3	Coed	Pvt-Baptist	1,156
Georgetown University, Washington, D.C	4	Coord	Pvt-Roman Catholic	7,142
Georgia, Medical College of, Augusta, Ga	3	Coed	Public	535
Georgia, University of, Athens, Ga	4	Coed	Public	13,741
Georgia, Woman's College of, Milledgeville, Ga	3	W	Public	1,006
Georgia Institute of Technology, Atlanta, Ga	4	Coed	Public	7,215
Georgia Military College, Milledgeville, Ga	1	M	Public	211
Georgia Southern College, Statesboro, Ga	3	Coed	Public	2,373
Georgia Southwestern College, Americus, Ga	1	Coed	Public	594
Georgia State College, Atlanta, Ga	3	Coed	Public	4,509
Georgian Court College, Lakewood, N.J	2	W	Pvt-Roman Catholic	517
Gettysburg College, Gettysburg, Pa	2	Coed	Pvt-Lutheran	1,853
Gibbs Junior College, St. Petersburg, Fla	1	Coed	Public	706
Glassboro State College, Glassboro, N.J	3	Coed	Public	4,458
Glendale College, Glendale, Calif	1	Coed	Public	1,777
Glenville State College, Glenville, W.Va	2	Coed	Public	965
Goddard College, Plainfield, Vt	2	Coed	Private	285
Gogebic Community College, Ironwood, Mich	1	Coed	Public	236
Golden Gate College, San Francisco, Calif	3	Coed	Private	1,866
Golden Gate Baptist Theol. Seminary, Mill Valley, Calif.	3	Coed	Pvt-Baptist	275
Gonzaga University, Spokane, Wash	3	Coed	Pvt-Roman Catholic	2,372
Good Counsel College, White Plains, N.Y	2	W	Pvt-Roman Catholic	496
Gordon College, Wenham, Mass	2	Coed	Private	788
Gordon Military College, Barnesville, Ga	1	M	Private	263
Gorham State Teachers College, Gorham, Me	2	Coed	Public	1,213
Goshen College, Goshen, Ind	2	Coed	Pvt-Mennonite	1,064
Goucher College, Baltimore, Md	3	W	Private	895
Grace Bible Institute, Omaha, Nebr	2	Coed	Private	351
Graceland College, Lamoni, Iowa	2	Coed	Pvt-Latter-day Saints	819
Grambling College, Grambling, La	2	Coed	Public	3,225
Grand Rapids Junior College, Grand Rapids, Mich	1	Coed	Public	2,868
Grand View College, Des Moines, Iowa	1	Coed	Pvt-Lutheran	964
Grays Harbor College, Aberdeen, Wash	1	Coed	Public	743
Great Falls, College of, Great Falls, Mont	2	Coed	Pvt-Roman Catholic	1,049
Green Mountain College, Poultney, Vt	1	W	Private	601
Greensboro College, Greensboro, N.C	2	Coed	Pvt-Methodist	589
Greenville College, Greenville, Ill	2	Coed	Pvt-Methodist	721
Grinnell College, Grinnell, Iowa	2	Coed	Private	1,148
Grossmont College, El Cajon, Calif	1	Coed	Public	2,727
Grove City College, Grove City, Pa	2	Coed	Private	1,855
Guam, College of, Agana, Guam	2	Coed	Private	318
Guelph, University of, Guelph, Ont	4	Coed	Public	1,502
Guilford College, Guilford College, N.C	3	Coed	Pvt-Friends	1,632
Gulf Coast Junior College, Panama City, Fla	1	Coed	Public	887
Gulf Park College, Gulfport, Miss	1	W	Private	268
Gustavus Adolphus College, St. Peter, Minn	2	Coed	Pvt-Lutheran	1,222
Gwynedd-Mercy College, Gwynedd Valley, Pa	1	W	Pvt-Roman Catholic	388
Hahnemann Medical College, Philadelphia, Pa	4	Coed	Private	440
Hamilton College, Clinton, N.Y	2	M	Private	802
Hamline University, St. Paul, Minn	3	Coed	Pvt-Methodist	1,002
Hampden-Sydney College, Hampden-Sydney, Va	2	M	Pvt-Presbyterian	518
Hampton Institute, Hampton, Va	3	Coed	Private	1,725
Hannibal-La Grange College, Hannibal, Mo	1	Coed	Pvt-Baptist	644
Hanover College, Hanover, Ind	2	Coed	Pvt-Presbyterian	915
Hardin-Simmons University, Abilene, Texas	3	Coed	Pvt-Baptist	1,652
Harding College, Searcy, Ark	3	Coed	Pvt-Church of Christ	1,281
Harris Teachers College, St. Louis, Mo	2	Coed	Public	924
Hartford, University of, Hartford, Conn	3	Coed	Private	7,141
Hartford Seminary Foundation, Hartford, Conn	4	Coed	Pvt-Interdenominational	208
Hartnell College, Salinas, Calif	1	Coed	Public	2,565
Hartwick College, Oneonta, N.Y	2	Coed	Pvt-Lutheran	1,114
Harvard University, Cambridge, Mass	4	M	Private	12,572
Harvey Mudd College, Claremont, Calif	2	Coed	Private	279
Hastings College, Hastings, Nebr	2	Coed	Pvt-Presbyterian	753
Haverford College, Haverford, Pa	2	M	Private	473
Hawaii, Church College of, Laie, Oahu, Hawaii	2	Coed	Pvt-Latter-day Saints	868
Hawaii, University of, Honolulu, Hawaii	4	Coed	Public	12,954
Hebrew Union College-Jewish Institute of Religion, Cincinnati, Ohio	4	M	Pvt-Jewish	460
Heidelberg College, Tiffin, Ohio	2	Coed	Pvt-Evangelical Reformed	1,052
Henderson County Junior College, Athens, Texas	1	Coed	Public	542
Henderson State Teachers College, Arkadelphia, Ark	3	Coed	Public	1,853
Hendrix College, Conway, Ark	2	Coed	Pvt-Methodist	572
Henry Ford Community College, Dearborn, Mich	1	Coed	Public	4,277
Hershey Junior College, Hershey, Pa	1	Coed	Public	291
Hesston College, Hesston, Kans	1	Coed	Pvt-Mennonite	257
Hibbing Junior College, Hibbing, Minn	1	Coed	Public	560
High Point College, High Point, N.C	2	Coed	Pvt-Methodist	1,404
Highland Park College, Highland Park, Mich	1	Coed	Public	1,937
Hillsdale College, Hillsdale, Mich	2	Coed	Private	898
Hinds Junior College, Raymond, Miss	1	Coed	Public	1,016
Hiram College, Hiram, Ohio	2	Coed	Private	864
Hiwassee College, Madisonville, Tenn	1	Coed	Pvt-Methodist	411
Hobart & William Smith Colleges, Geneva, N.Y	3	Coord	Private	1,336
Hofstra University, Hempstead, L.I., N.Y	3	Coed	Private	9,080
Hollins College, Hollins College, Va	3	W	Private	699
Holmes Junior College, Goodman, Miss	1	Coed	Public	416
Holy Cross, College of the, Worcester, Mass	3	M	Pvt-Roman Catholic	1,826
Holy Family College, Philadelphia, Pa	2	W	Pvt-Roman Catholic	447
Holy Family College, Manitowoc, Wis	2	W	Pvt-Roman Catholic	403
Holy Names, College of the, Oakland, Calif	3	W	Pvt-Roman Catholic	916
Hood College, Frederick, Md	2	W	Private	685
Hope College, Holland, Mich	2	Coed	Pvt-Reformed	1,545
Houghton College, Houghton, N.Y	2	Coed	Pvt-Methodist	1,000
Houston, University of, Houston, Texas	4	Coed	Public	17,430
Howard College, Birmingham, Ala	2	Coed	Pvt-Baptist	2,225
Howard County Junior College, Big Springs, Texas	1	Coed	Public	812
Howard Payne College, Brownwood, Texas	3	Coed	Pvt-Baptist	1,013
Howard University, Washington, D.C	4	Coed	Public-Private	6,517
Hudson Valley Community College, Troy, N.Y	1	Coed	Public	275
Humboldt State College, Arcata, Calif	3	Coed	Public	2,953
Humphreys College, Stockton, Calif	1	Coed	Private	369
Hunter College (of the City University of New York), New York, N.Y	3	Coed	Public	22,293

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Huntingdon College, Montgomery, Ala	2	Coed	Pvt-Methodist	915
Huntington College, Huntington, Ind	2	Coed	Pvt-Brethren	485
Huron College (of Western Ontario University), London, Ontario	2	Coed	Pvt-Anglican	546
Huron College, Huron, S.Dak	2	Coed	Pvt-Presbyterian	584
Husson College, Bangor, Me	2	Coed	Private	601
Huston-Tillotson College, Austin, Texas	2	Coed	Private	586
Hutchinson Junior College, Hutchinson, Kans	1	Coed	Public	1,030
Idaho, College of, Caldwell, Idaho	3	Coed	Pvt-Presbyterian	892
Idaho, University of, Moscow, Idaho	4	Coed	Public	5,084
Idaho State University, Pocatello, Idaho	3	Coed	Public	3,831
Illinois, University of, Urbana and Chicago, Ill	4	Coed	Public	35,859
Illinois College, Jacksonville, Ill	2	Coed	Private	564
Illinois College of Optometry, Chicago, Ill	2	Coed	Private	225
Illinois Institute of Technology, Chicago, Ill	4	Coed	Private	7,618
Illinois State University, Normal, Ill	3	Coed	Public	7,110
Illinois Wesleyan University, Bloomington, Ill	3	Coed	Pvt-Methodist	1,229
Immaculata College, Immaculata, Pa	2	W	Pvt-Roman Catholic	965
Immaculata Junior College, Washington, D.C	2	W	Pvt-Roman Catholic	236
Immaculate Conception Seminary, Conception, Mo	3	M	Pvt-Roman Catholic	370
Immaculate Heart College, Los Angeles, Calif	3	W	Pvt-Roman Catholic	1,451
Imperial Valley College, Imperial, Calif	1	Coed	Public	762
Incarnate Word College, San Antonio, Texas	3	W	Pvt-Roman Catholic	1,079
Independence Community College, Independence, Kans	1	Coed	Public	428
Indiana Central College, Indianapolis, Ind	2	Coed	Pvt-Brethren	1,948
Indiana Institute of Technology, Fort Wayne, Ind	2	M	Private	1,364
Indiana State College, Terre Haute, Ind	3	Coed	Public	7,440
Indiana State College, Indiana, Pa	3	Coed	Public	5,209
Indiana University, Bloomington, Ind	4	Coed	Public	34,032
Inter American University of Puerto Rico, San Germán, P.R.	2	Coed	Private	4,843
Iona College, New Rochelle, N.Y	2	M	Pvt-Roman Catholic	2,543
Iowa, State College of, Cedar Falls, Iowa	3	Coed	Public	5,561
Iowa, State University of, Iowa City, Iowa	4	Coed	Public	12,923
Iowa State University of Science & Technology, Ames, Iowa	4	Coed	Public	11,300
Iowa Wesleyan College, Mt. Pleasant, Iowa	2	Coed	Pvt-Methodist	908
Itawamba Junior College, Fulton, Miss	1	Coed	Public	653
Ithaca College, Ithaca, N.Y	2	Coed	Private	2,314
Jackson Junior College, Jackson, Mich	1	Coed	Public	1,612
Jackson State College, Jackson, Miss	3	Coed	Public	1,193
Jacksonville State College, Jacksonville, Ala	3	Coed	Public	2,603
Jacksonville University, Jacksonville, Fla	2	Coed	Private	2,199
Jamestown College, Jamestown, N.Dak	2	Coed	Pvt-Presbyterian	420
Jamestown Community College, Jamestown, N.Y	1	Coed	Public	307
Jasper County Junior College, Joplin, Mo	1	Coed	Public	1,027
Jefferson Medical College of Philadelphia, Pa	4	Coord	Private	695
Jersey City State College, Jersey City, N.J	2	Coed	Public	3,217
Jewish Theological Seminary of America, New York, N.Y	4	Coed	Pvt-Jewish	381
John Brown University, Siloam Springs, Ark	2	Coed	Private	425
John Carroll University, Cleveland, Ohio	3	M	Pvt-Roman Catholic	4,197
John Marshall Law School, Chicago, Ill	3	Coed	Private	709
Johns Hopkins University, Baltimore, Md	4	Coord	Private	8,966
Johnson C. Smith University, Charlotte, N.C	2	Coed	Pvt-Presbyterian	946
Johnson State College, Johnson, Vt	2	Coed	Public	307
Joliet Junior College, Joliet, Ill	1	Coed	Public	2,101
Jones College, Jacksonville, Fla	1	Coed	Private	1,037
Jones County Junior College, Ellisville, Miss	1	Coed	Public	1,101
Judson College, Marion, Ala	2	W	Pvt-Baptist	302
Juilliard School of Music, New York, N.Y	3	Coed	Private	969
Juniata College, Huntington, Pa	2	Coed	Pvt-Brethren	833
Kalamazoo College, Kalamazoo, Mich	3	Coed	Pvt-Baptist	919
Kansas, University of, Lawrence, Kans	4	Coed	Public	12,486
Kansas City Art Institute & School of Design, Kansas City, Mo	2	Coed	Private	259
Kansas City College of Osteopathy & Surgery, Kansas City, Mo	2	Coed	Private	378
Kansas City Kansas Junior College, Kansas City, Kans	1	Coed	Public	873
Kansas State College of Pittsburg, Kans	3	Coed	Public	3,865
Kansas State Teachers College, Emporia, Kans	3	Coed	Public	5,198
Kansas State University of Agriculture & Applied Science, Manhattan, Kans	4	Coed	Public	9,158
Kansas Wesleyan University, Salina, Kans	2	Coed	Pvt-Methodist	584
Kearney State College, Kearney, Nebr	3	Coed	Public	2,930
Keene State College, Keene, N.H	3	Coed	Public	1,370
Kendall College, Evanston, Ill	1	Coed	Pvt-Methodist	523
Kent State University, Kent, Ohio	4	Coed	Public	16,601
Kentucky, University of, Lexington, Ky	4	Coed	Public	11,348
Kentucky State College, Frankfort, Ky	2	Coed	Public	924
Kentucky Wesleyan College, Owensboro, Ky	2	Coed	Pvt-Methodist	756
Kenyon College, Gambier, Ohio	2	M	Private	623
Keuka College, Keuka Park, N.Y	2	W	Pvt-Baptist	646
Keystone Junior College, La Plume, Pa	1	Coed	Private	432
Kilgore College, Kilgore, Texas	1	Coed	Public	1,649
King College, Bristol, Tenn	2	Coed	Pvt-Presbyterian	258
King's College, Charlotte, N.C	1	Coed	Private	849
King's College, Wilkes-Barre, Pa	2	M	Pvt-Roman Catholic	1,247
Kirksville College of Osteopathy & Surgery, Kirksville, Mo	2	Coed	Private	361
Knox College, Galesburg, Ill	2	Coed	Private	1,132
Knoxville College, Knoxville, Tenn	2	Coed	Pvt-Presbyterian	741
Kutztown State College, Kutztown, Pa	3	Coed	Public	2,326
Ladycliff College, Highland Falls, N.Y	2	W	Pvt-Roman Catholic	448
Lafayette College, Easton, Pa	2	M	Pvt-Presbyterian	1,803
La Grange College, La Grange, Ga	2	Coed	Pvt-Methodist	496
Lake Erie College, Painesville, Ohio	2	W	Private	976
Lake Forest College, Lake Forest, Ill	2	Coed	Pvt-Presbyterian	1,240
Lake Michigan College, Benton Harbor, Mich	1	Coed	Public	1,245
Lakeland College, Sheboygan, Wis	2	Coed	Pvt-Church of Christ	461
Lamar State College of Technology, Beaumont, Texas	3	Coed	Public	6,053
Lambuth College, Jackson, Tenn	2	Coed	Pvt-Methodist	654
Lander College, Greenwood, S.C	2	Coed	Private	453
Lane College, Jackson, Tenn	2	Coed	Pvt-Methodist Episcopal	529
Langston University, Langston, Okla	2	Coed	Public	603
Lansing Community College, Lansing, Mich	1	Coed	Public	1,257
Laredo Junior College, Laredo, Texas	1	Coed	Public	931
La Salle College, Philadelphia, Pa	2	M	Pvt-Roman Catholic	5,255
La Salle-Peru-Oglesby Junior College, La Salle, Ill	1	Coed	Public	908
Lasell Junior College, Auburndale, Mass	1	W	Private	669
La Sierra College, Arlington, Calif	3	Coed	Pvt-Seventh-day Adventist	1,164
Lassen College, Susanville, Calif	1	Coed	Public	265
Laval University, Quebec, Quebec	4	Coed	Pvt-Roman Catholic	13,072
La Verne College, La Verne, Calif	3	Coed	Pvt-Brethren	514
Lawrence University, Appleton, Wis	4	Coed	Private	1,417
Lebanon Valley College, Annville, Pa	2	Coed	Pvt-Evangelical United Brethren	1,239
Lee College, Cleveland, Tenn	2	Coed	Pvt-Church of God	575
Lee College, Baytown, Texas	1	Coed	Public	1,295
Lees-McRae College, Banner Elk, N.C	1	Coed	Pvt-Presbyterian	321
Lehigh University, Bethlehem, Pa	4	M	Private	3,910
Leicester Junior College, Leicester, Mass	1	M	Private	214
Le Moyne College, Syracuse, N.Y	2	Coed	Pvt-Roman Catholic	1,430

Name and Location	Level of Instruction	Student Body	Control	Enrollment
LeMoyne College, Memphis, Tenn	2	Coed	Pvt-American Missionary Association	552
Lenoir-Rhyne College, Hickory, N.C	2	Coed	Pvt-Lutheran	1,143
Lesley College, Cambridge, Mass	3	W	Private	561
Lewis & Clark College, Portland, Oreg	3	Coed	Pvt-Presbyterian	1,204
Lewis-Clark Normal School, Lewiston, Idaho	1	Coed	Public	361
Lewis College, Lockport, Ill	2	Coed	Pvt-Roman Catholic	832
Limestone College, Gaffney, S.C	2	W	Private	534
Lincoln Christian College, Lincoln, Ill	3	Coed	Pvt-Christian	500
Lincoln College, Lincoln, Ill	1	Coed	Pvt-Undenominational	493
Lincoln Memorial University, Harrogate, Tenn	2	Coed	Private	519
Lincoln University, Jefferson City, Mo	3	Coed	Public	1,559
Lincoln University, Lincoln University, Pa	2	Coed	Private	466
Lindenwood College for Women, St. Charles, Mo	2	W	Pvt-Presbyterian	573
Lindsey Wilson College, Columbia, Ky	1	Coed	Pvt-Methodist	426
Linfield College, McMinnville, Oreg	3	Coed	Pvt-Baptist	1,054
Little Rock University, Little Rock, Ark	2	Coed	Private	2,021
Livingston State College, Livingston, Ala	3	Coed	Public	906
Livingstone College, Salisbury, N.C	2	Coed	Pvt-Methodist Episcopal	698
Lock Haven State College, Lock Haven, Pa	2	Coed	Public	1,419
Loma Linda University, Loma Linda, Calif	4	Coed	Pvt-Seventh-day Adventist	1,030
Long Beach City College, Long Beach, Calif	1	Coed	Public	9,776
Long Beach State College, Long Beach, Calif	3	Coed	Public	15,084
Long Island University, Brooklyn, N.Y. (incl. Bklyn. College of Pharmacy; C.W. Post, Mitchel, & Hauppauge colleges, Long Island, N.Y.)	3	Coed	Private	12,361
Lon Morris College, Jacksonville, Texas	1	Coed	Pvt-Methodist	356
Longwood College, Farmville, Va	3	W	Public	1,392
Loras College, Dubuque, Iowa	2	M	Pvt-Roman Catholic	1,395
Loretto Heights College, Loretto, Colo	2	W	Pvt-Roman Catholic	874
Los Angeles City College, Los Angeles, Calif	1	Coed	Public	17,275
Los Angeles Harbor College, Wilmington, Calif	1	Coed	Public	4,586
Los Angeles Metropolitan College, Los Angeles, Calif	1	Coed	Public	4,906
Los Angeles Pacific College, Los Angeles, Calif	2	Coed	Pvt-Methodist	209
Los Angeles Pierce College, Woodland Hills, Calif	1	Coed	Public	10,480
Los Angeles Trade-Technical College, Los Angeles, Calif	1	Coed	Public	9,319
Los Angeles Valley College, Van Nuys, Calif	1	Coed	Public	8,723
Louisburg College, Louisburg, N.C	1	Coed	Pvt-Methodist	632
Louisiana College, Pineville, La	2	Coed	Pvt-Baptist	948
Louisiana Polytechnic Institute, Ruston, La	3	Coed	Public	4,386
Louisiana State University & Agricultural & Mechanical College, Baton Rouge, La	4	Coed	Public	19,302
Louisville, University of, Louisville, Ky	4	Coed	Public	7,151
Lowell Technological Institute, Lowell, Mass	4	Coed	Public	1,553
Lower Columbia College, Longview, Wash	1	Coed	Public	882
Loyola College, Baltimore, Md	3	Coord	Pvt-Roman Catholic	2,232
Loyola College (of the University of Montreal), Montreal, Quebec	2	Coed	Pvt-Roman Catholic	1,425
Loyola University, Chicago, Ill	4	Coed	Pvt-Roman Catholic	10,951
Loyola University, New Orleans, La	3	Coord	Pvt-Roman Catholic	2,995
Loyola University of Los Angeles, Calif	3	M	Pvt-Roman Catholic	2,086
Lubbock Christian College, Lubbock, Texas	1	Coed	Pvt-Church of Christ	468
Luther College, Decorah, Iowa	2	Coed	Pvt-Lutheran	1,243
Luther Theological Seminary, St. Paul, Minn	3	M	Pvt-Lutheran	497
Lutheran School of Theology, Maywood, Ill	4	M	Pvt-Lutheran	351
Lutheran Theological Seminary, Philadelphia, Pa	3	Coed	Pvt-Lutheran	292
Lycoming College, Williamsport, Pa	2	Coed	Pvt-Methodist	1,415
Lynchburg College, Lynchburg, Va	2	Coed	Pvt-Disciples of Christ	831
Lyons Township Junior College, La Grange, Ill	1	Coed	Public	1,021
Macalester College, St. Paul, Minn	3	Coed	Private	1,494
McCormick Theological Seminary, Chicago, Ill	3	Coed	Pvt-Presbyterian	205
McGill University, Montreal, Quebec	4	Coed	Private	9,651

Name and Location	Level of Instruction	Student Body	Control	Enrollment
McMaster University, Hamilton, Ontario	4	Coed	Private	2,578
MacMurray College, Jacksonville, Ill	2	Coord	Pvt-Methodist	1,022
McMurry College, Abilene, Texas	3	Coed	Pvt-Methodist	1,717
McNeese State College, Lake Charles, La	2	Coed	Public	2,802
McPherson College, McPherson, Kans	2	Coed	Pvt-Brethren	615
Madison College, Harrisonburg, Va	3	Coed	Public	1,795
Madonna College, Livonia, Mich	2	W	Pvt-Roman Catholic	390
Maine, University of, Orono, Me	4	Coed	Public	7,813
Malone College, Canton, Ohio	2	Coed	Pvt-Friends	771
Manatee Junior College, Bradenton, Fla	1	Coed	Public	1,353
Manchester College, North Manchester, Ind	2	Coed	Pvt-Brethren	1,163
Manhattan College, New York, N.Y	3	M	Pvt-Roman Catholic	3,686
Manhattan School of Music, New York, N.Y	3	Coed	Private	613
Manhattanville College of the Sacred Heart, Purchase, N.Y	3	W	Pvt-Roman Catholic	849
Manitoba, University of, Winnipeg, Man. (incl. Brandon & St. Paul's & United colleges, qq.v.)	4	Coed	Public	8,578
Mankato State College, Mankato, Minn	3	Coed	Public	8,188
Mansfield State College, Mansfield, Pa	2	Coed	Public	1,372
Marian College, Indianapolis, Ind	2	Coed	Pvt-Roman Catholic	827
Marian College of Fond du Lac, Fond du Lac, Wis	2	W	Pvt-Roman Catholic	471
Marietta College, Marietta, Ohio	2	Coed	Private	1,886
Marillac College, Normandy, Mo	2	W	Pvt-Roman Catholic	361
Marin, College of, Kentfield, Calif	1	Coed	Public	2,707
Marion Institute, Marion, Ala	1	M	Private	374
Marist College, Poughkeepsie, N.Y	2	M	Pvt-Roman Catholic	1,318
Marquette University, Milwaukee, Wis	4	Coed	Pvt-Roman Catholic	10,324
Mars Hill College, Mars Hill, N.C	1	Coed	Pvt-Baptist	1,240
Marshall University, Huntington, W.Va	3	Coed	Public	5,125
Martin College, Pulaski, Tenn	1	Coed	Pvt-Methodist	303
Mary Baldwin College, Staunton, Va	2	W	Pvt-Presbyterian	573
Mary Hardin-Baylor College, Belton, Texas	2	Coed	Pvt-Baptist	860
Mary Manse College, Toledo, Ohio	2	W	Pvt-Roman Catholic	1,322
Mary Rogers College, Maryknoll, N.Y	2	W	Pvt-Roman Catholic	201
Mary Washington College of the University of Virginia, Fredericksburg, Va	2	W	Public	...[4]
Marycrest College, Davenport, Iowa	2	W	Pvt-Roman Catholic	1,003
Marygrove College, Detroit, Mich	2	W	Pvt-Roman Catholic	1,275
Maryknoll Seminary, Glen Ellyn, Ill	2	M	Pvt-Roman Catholic	390
Maryknoll Seminary, Maryknoll, N.Y	3	M	Pvt-Roman Catholic	202
Maryland, University of, College Park & Baltimore, Md. (incl. Maryland State College, Princess Anne, q.v.)	4	Coed	Public	29,235
Maryland State College of the University of Maryland, Princess Anne, Md	2	Coed	Private	...[5]
Marylhurst College, Marylhurst, Oreg	2	W	Pvt-Roman Catholic	663
Marymount College, Palos Verdes Estates, Calif	2	W	Pvt-Roman Catholic	301
Marymount College, Salina, Kans	2	W	Pvt-Roman Catholic	481
Marymount College, Tarrytown, N.Y	2	W	Pvt-Roman Catholic	801
Marymount College, Arlington, Va	1	W	Pvt-Roman Catholic	444
Marymount Manhattan College, New York, N.Y	2	W	Pvt-Roman Catholic	570
Maryville College, Maryville, Tenn	2	Coed	Pvt-Presbyterian	757
Maryville College of the Sacred Heart, St. Louis, Mo	2	W	Pvt-Roman Catholic	328
Marywood College, Scranton, Pa	3	W	Pvt-Roman Catholic	1,503
Mason City Junior College, Mason City, Iowa	1	Coed	Public	850
Massachusetts, University of, Amherst, Mass	4	Coed	Public	8,357
Massachusetts College of Art, Boston, Mass	2	Coed	Public	503
Massachusetts College of Pharmacy, Boston, Mass	4	Coed	Private	591
Massachusetts Institute of Technology, Cambridge, Mass	4	Coed	Private	6,862
Massachusetts State College at Boston, Mass	3	Coed	Public	3,716
Massachusetts State College at Bridgewater, Mass	3	Coed	Public	2,854
Massachusetts State College at Fitchburg, Mass	3	Coed	Public	1,508
Massachusetts State College at Framingham, Mass	2	W	Public	1,684
Massachusetts State College at Lowell, Mass	2	Coed	Public	736

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Massachusetts State College at North Adams, Mass	3	Coed	Public	959
Massachusetts State College at Salem, Mass	3	Coed	Public	2,992
Massachusetts State College at Westfield, Mass	3	Coed	Public	1,351
Massachusetts State College at Worcester, Mass	3	Coed	Public	1,832
Mayville State College, Mayville, N.Dak	2	Coed	Public	721
Meharry Medical College, Nashville, Tenn	2	Coed	Private	342
Memorial University of Newfoundland, St. John's, Nfld	3	Coed	Public	2,244
Memphis State University, Memphis, Tenn	3	Coed	Public	8,697
Menlo College, Menlo Park, Calif	2	M	Private	482
Mercer University, Macon, Ga	3	Coed	Pvt-Baptist	1,539
Mercyhurst College, Erie, Pa	2	W	Pvt-Roman Catholic	495
Meredith College, Raleigh, N.C	2	W	Pvt-Baptist	847
Meridian Junior College, Meridian, Miss	1	Coed	Public	590
Merrimack College, North Andover, Mass	2	Coed	Pvt-Roman Catholic	2,305
Mesa County Junior College, Grand Junction, Colo	1	Coed	Public	1,694
Messiah College, Grantham, Pa	2	Coed	Pvt-Brethren	248
Metropolitan Junior College, Kansas City, Mo	1	Coed	Public	3,332
Miami, University of, Coral Gables, Fla	4	Coed	Private	13,207
Miami University, Oxford, Ohio	3	Coed	Public	12,411
Michigan, University of, Ann Arbor, Mich	4	Coed	Public	30,799
Michigan Technological University, Houghton, Mich	3	Coed	Public	3,617
Michigan State University, East Lansing, Mich	4	Coed	Public	31,555
Middle Georgia College, Cochran, Ga	1	Coed	Public	771
Middle Tennessee State College, Murfreesboro, Tenn	3	Coed	Public	4,154
Middlebury College, Middlebury, Vt	4	Coed	Private	1,343
Midland Lutheran College, Fremont, Nebr	2	Coed	Pvt-Lutheran	828
Midwestern University, Wichita Falls, Texas	3	Coed	Public	2,513
Millersville State College, Millersville, Pa	3	Coed	Public	2,602
Milligan College, Milligan College, Tenn	2	Coed	Private	589
Millikin University, Decatur, Ill	3	Coed	Pvt-Presbyterian	1,667
Mills College, Oakland, Calif	3	W	Private	759
Mills College of Education, New York, N.Y	2	W	Private	318
Millsaps College, Jackson, Miss	2	Coed	Pvt-Methodist	898
Milwaukee Institute of Technology, Milwaukee, Wis	1	Coed	Public	6,644
Milwaukee School of Engineering, Milwaukee, Wis	2	M	Private	1,372
Minneapolis School of Art, Minneapolis, Minn	2	Coed	Private	304
Minnesota, University of, Minneapolis, Minn	4	Coed	Public	49,228
Minot State College, Minot, N.Dak	2	Coed	Public	2,138
Misericordia, College, Dallas, Pa	2	W	Pvt-Roman Catholic	1,322
Mississippi, University of, University, Miss	4	Coed	Public	5,679
Mississippi College, Clinton, Miss	3	Coed	Pvt-Baptist	1,802
Mississippi Delta Junior College, Moorhead, Miss	1	Coed	Public	482
Mississippi State College for Women, Columbus, Miss	2	W	Public	2,393
Mississippi State University, State College, Miss	4	Coed	Public	6,025
Missouri, University of, Columbia, Mo	4	Coed	Public	25,423
Missouri Valley College, Marshall, Mo	2	Coed	Pvt-Presbyterian	663
Mitchell College, New London, Conn	1	Coed	Private	1,216
Mitchell College, Statesville, N.C	1	Coed	Private	519
Modesto Junior College, Modesto, Calif	1	Coed	Public	2,441
Mohawk Valley Community College, Utica, N.Y	1	Coed	Public	2,625
Moncton University, Moncton, New Brunswick	3	Coed	Pvt-Roman Catholic	1,158
Monmouth College, Monmouth, Ill	2	Coed	Pvt-Presbyterian	878
Monmouth College, West Long Branch, N.J	2	Coed	Private	3,587
Monroe Community College, Rochester, N.Y	1	Coed	Public	936
Montana School of Mines, Butte, Mont	3	Coed	Public	484
Montana State University, Bozeman, Mont	4	Coed	Public	4,770
Montana State University, Missoula, Mont	4	Coed	Public	4,736
Montclair State College, Upper Montclair, N.J	3	Coed	Public	4,517
Monterey Peninsula College, Monterey, Calif	1	Coed	Public	3,491
Montgomery Junior College, Takoma Park, Md	1	Coed	Public	1,871
Monticello College, Alton, Ill	1	W	Private	237
Montreal, University of, Montreal, Quebec	4	Coed	Pvt-Roman Catholic	26,572
Montreat-Anderson College, Montreat, N.C	1	Coed	Pvt-Presbyterian	253
Moody Bible Institute, The, Chicago, Ill	1	Coed	Private	947
Moore College of Art, Philadelphia, Pa	2	W	Private	441
Moorhead State College, Moorhead, Minn	3	Coed	Public	2,902
Moravian College, Bethlehem, Pa	2	Coed	Pvt-Moravian	942
Morehead State College, Morehead, Ky	3	Coed	Public	3,337
Morehouse College, Atlanta, Ga	2	M	Private	835
Morgan State College, Baltimore, Md	2	Coed	Public	2,819
Morningside College, Sioux City, Iowa	2	Coed	Pvt-Methodist	1,504
Morris Brown College, Atlanta, Ga	2	Coed	Pvt-Methodist Episcopal	908
Morris Harvey College, Charleston, W.Va	2	Coed	Private	2,385
Morton Junior College, Cicero, Ill	1	Coed	Public	1,915
Mount Allison University, Sackville, New Brunswick	3	Coed	Pvt-United Church	1,211
Mount Aloysius Junior College, Cresson, Pa	1	W	Pvt-Roman Catholic	331
Mount Angel College, Mount Angel, Oreg	2	Coed	Pvt-Roman Catholic	326
Mount Holyoke College, South Hadley, Mass	3	W	Private	1,629
Mount Marty College, Yankton, S.Dak	2	W	Pvt-Roman Catholic	334
Mount Mary College, Milwaukee, Wis	2	W	Pvt-Roman Catholic	1,221
Mount Mercy College, Cedar Rapids, Iowa	2	W	Pvt-Roman Catholic	464
Mount Mercy College, Pittsburgh, Pa	2	W	Pvt-Roman Catholic	1,310
Mount Olive Junior College, Mount Olive, N.C	1	Coed	Pvt-Baptist	201
Mount St. Agnes College, Baltimore, Md	2	W	Pvt-Roman Catholic	438
Mount St. Clare College, Clinton, Iowa	1	W	Pvt-Roman Catholic	290
Mount St. Joseph-on-the-Ohio, College of, Mt. St. Joseph, Ohio	2	W	Pvt-Roman Catholic	1,174
Mount St. Joseph College, Buffalo, N.Y	3	W	Pvt-Roman Catholic	475
Mount St. Mary College, Hooksett, N.H	2	W	Pvt-Roman Catholic	289
Mount St. Mary's College, Los Angeles, Calif	3	Coord	Pvt-Roman Catholic	1,324
Mount St. Mary's College, Emmitsburgh, Md	2	M	Pvt-Roman Catholic	792
Mount St. Scholastica College, Atchison, Kans	2	W	Pvt-Roman Catholic	498
Mount St. Vincent, College of, New York, N.Y	2	W	Pvt-Roman Catholic	818
Mount St. Vincent College, Halifax, Nova Scotia	3	W	Pvt-Roman Catholic	461
Mount San Antonio College, Pomona, Calif	1	Coed	Public	6,140
Mount Union College, Alliance, Ohio	2	Coed	Pvt-Methodist	1,043
Muhlenberg College, Allentown, Pa	2	Coed	Pvt-Lutheran	1,594
Multnomah College, Portland, Oreg	1	Coed	Private	1,571
Multnomah School of the Bible, Portland, Oreg	2	Coed	Pvt-Interdenominational	380
Mundelein College, Chicago, Ill	2	W	Pvt-Roman Catholic	1,220
Murray State Agricultural College, Tishomingo, Okla	1	Coed	Public	383
Murray State College, Murray, Ky	3	Coed	Public	4,136
Muskegon Community College, Muskegon, Mich	1	Coed	Public	1,811
Muskingum College, New Concord, Ohio	2	Coed	Pvt-Presbyterian	1,528
Napa College, Napa, Calif	1	Coed	Public	1,278
Nasson College, Springvale, Me	2	Coed	Private	537
National College of Education, Evanston, Ill	3	Coed	Private	764
Navarro Junior College, Corsicana, Texas	1	Coed	Public	822
Nazareth College, Kalamazoo, Mich	2	W	Pvt-Roman Catholic	403
Nazareth College of Kentucky, Nazareth, Ky	2	W	Pvt-Roman Catholic	443
Nazareth College of Rochester, N.Y	3	W	Pvt-Roman Catholic	1,120
Nebraska, University of, Lincoln, Nebr	4	Coed	Public	11,463
Nebraska Wesleyan University, Lincoln, Nebr	2	Coed	Pvt-Methodist	1,254
Nevada, University of, Reno, Nev	4	Coed	Public	5,599
New Bedford Institute of Technology, New Bedford, Mass	3	Coed	Public	649
New Brunswick, University of, Federicton, New Brunswick	4	Coed	Public	2,510
New England Conservatory of Music, Boston, Mass	3	Coed	Private	388
New Hampshire, University of, Durham, N.H	4	Coed	Public	4,368
New Haven College, West Haven, Conn	2	Coed	Private	2,167
New Mexico, University of, Albuquerque, N.Mex	4	Coed	Public	9,635
New Mexico Highlands University, Las Vegas, N.Mex	4	Coed	Public	1,360
New Mexico Institute of Mining & Technology, Socorro, N.Mex	4	Coed	Public	348

Name and Location	*Level of Instruction*	*Student Body*	*Control*	*Enrollment*
New Mexico Military Institute, Roswell, N.Mex.	1	M	Public	286
New Mexico State University, University Park, N.Mex.	4	Coed	Public	5,000
New Orleans Baptist Theological Seminary, New Orleans, La.	4	Coed	Pvt-Baptist	770
New Rochelle, College of, New Rochelle, N.Y.	2	W	Pvt-Roman Catholic	918
New School for Social Research, New York, N.Y.	4	Coed	Private	1,628
New York, *State University of, Albany, N.Y.:*				73,434
Agricultural & Technical Institute at Alfred	1	Coed	Public	1,648
Agricultural & Technical Institute at Canton	1	Coed	Public	752
Agricultural & Technical Institute at Cobleskill	1	Coed	Public	950
Agricultural & Technical Institute at Delhi	1	Coed	Public	698
Agricultural & Technical Institute at Farmingdale	1	Coed	Public	5,678
Agricultural & Technical Institute at Morrisville	1	Coed	Public	943
College of Agriculture at Cornell University, Ithaca	4	Coed	Public	2,770
College of Ceramics at Alfred University, Alfred	4	Coed	Public	464
College of Forestry at Syracuse University, Syracuse	4	Coed	Public	896
College of Home Economics at Cornell University, Ithaca	4	Coed	Public	771
Downstate Medical Center, Brooklyn	4	Coed	Public	698
Graduate School of Public Affairs, Albany	4	Coed	Public	279
Harpur College, Binghamton	3	Coed	Public	2,194
Maritime College at Fort Schuyler	2	M	Public	630
School of Industrial & Labor Relations at Cornell University, Ithaca	4	Coed	Public	463
State University College at Brockport	3	Coed	Public	2,500
State University College at Buffalo	4	Coed	Public	4,748
State University College at Cortland	3	Coed	Public	3,679
State University College at Fredonia	3	Coed	Public	2,026
State University College at Geneseo	3	Coed	Public	2,351
State University College at New Paltz	3	Coed	Public	3,527
State University College at Oneonta	3	Coed	Public	2,954
State University College at Oswego	3	Coed	Public	3,894
State University College at Plattsburgh	3	Coed	Public	2,746
State University College at Potsdam	3	Coed	Public	2,180
State University at Albany	4	Coed	Public	3,858
State University at Buffalo	3	Coed	Public	17,142
State University at Stony Brook	4	Coed	Public	1,065
Upstate Medical Center, Syracuse	4	Coed	Public	464
Veterinary College at Cornell University, Ithaca	4	Coed	Public	274
New York City Community College of Applied Arts & Sciences, Brooklyn, N.Y.	1	Coed	Public	8,750
New York Law School, New York, N.Y.	4	Coed	Private	565
New York Medical College, New York, N.Y.	4	Coed	Private	518
New York University, New York, N.Y.	4	Coed	Private	30,467
Newark College of Engineering, Newark, N.J.	4	Coed	Public	4,614
Newark State College, Union, N.J.	3	Coed	Public	5,746
Newberry College, Newberry, S.C.	2	Coed	Pvt-Lutheran	709
Newton College of the Sacred Heart, Newton, Mass.	2	W	Pvt-Roman Catholic	665
Newton Junior College, Newtonville, Mass.	1	Coed	Public	412
Niagara University, Niagara University, N.Y.	3	Coed	Pvt-Roman Catholic	1,992
Norman College, Norman Park, Ga.	1	Coed	Pvt-Baptist	438
North Carolina, Agricultural & Technical College of, Greensboro, N.C.	3	Coed	Public	2,885
North Carolina, University of, at Chapel Hill, N.C.	4	Coed	Public	11,713
North Carolina, University of, at Greensboro, N.C.	4	Coed	Public	4,102
North Carolina College at Durham, N.C.	4	Coed	Public	2,231
North Carolina State of the University of North Carolina at Raleigh, N.C.	4	Coed	Public	8,652
North Central College, Naperville, Ill.	2	Coed	Pvt-Brethren	901
North Dakota, University of, Grand Forks, N.Dak.	4	Coed	Public	5,235
North Dakota State Teachers College, Dickinson, N.Dak.	2	Coed	Public	912
North Dakota State University, Fargo, N.Dak.	4	Coed	Public	3,988

Name and Location	*Level of Instruction*	*Student Body*	*Control*	*Enrollment*
North Florida Junior College, Madison, Fla.	1	Coed	Public	514
North Georgia College, Dahlonega, Ga.	2	Coed	Public	960
North Greenville Junior College, Tigerville, S.C.	1	Coed	Pvt-Baptist	493
North Idaho Junior College, Coeur d'Alene, Idaho	1	Coed	Public	543
North Park College & Theological Seminary, Chicago, Ill.	2	Coed	Pvt-Evangelical Covenant	1,500
North Texas State University, Denton, Texas	4	Coed	Public	11,532
Northeast Louisiana State College, Monroe, La.	3	Coed	Public	3,639
Northeast Mississippi Junior College, Booneville, Miss.	1	Coed	Public	547
Northeast Missouri State Teachers College, Kirksville, Mo.	3	Coed	Public	3,803
Northeastern Junior College, Sterling, Colo.	1	Coed	Public	805
Northeastern Oklahoma Agricultural & Mechanical College, Miami, Okla.	1	Coed	Public	1,453
Northeastern State College, Tahlequah, Okla.	3	Coed	Public	3,387
Northeastern University, Boston, Mass.	4	Coed	Private	20,831
Northern Illinois University, De Kalb, Ill.	4	Coed	Public	11,956
Northern Michigan University, Marquette, Mich.	3	Coed	Public	3,947
Northern Montana College, Havre, Mont.	2	Coed	Public	936
Northern Oklahoma Junior College, Tonkawa, Okla.	1	Coed	Public	679
Northern State College, Aberdeen, S.Dak.	3	Coed	Public	1,817
Northland College, Ashland, Wis.	2	Coed	Private	445
Northrop Institute of Technology, Inglewood, Calif.	2	Coed	Private	1,323
Northwest Christian College, Eugene, Oreg.	2	Coed	Pvt-Disciples of Christ	388
Northwest College, Kirkland, Wash.	2	Coed	Pvt-Assemblies of God	268
Northwest Community College, Powell, Wyo.	1	Coed	Public	317
Northwest Mississippi Junior College, Senatobia, Miss.	1	Coed	Public	588
Northwest Missouri State College, Maryville, Mo.	2	Coed	Public	3,088
Northwest Nazarene College, Nampa, Idaho	2	Coed	Pvt-Nazarene	864
Northwestern College, Orange City, Iowa	2	Coed	Pvt-Reformed	410
Northwestern Michigan College, Traverse City, Mich.	1	Coed	Public	935
Northwestern State College, Alva, Okla.	3	Coed	Public	1,289
Northwestern State College of Louisiana, Natchitoches, La.	3	Coed	Public	3,730
Northwestern University, Evanston, Ill.	4	Coed	Private	16,469
Norwich University, Northfield, Vt.	2	M	Private	1,159
Notre Dame, College of, Belmont, Calif.	2	W	Pvt-Roman Catholic	386
Notre Dame, University of, Notre Dame, Ind.	4	M	Pvt-Roman Catholic	6,797
Notre Dame College, St. Louis, Mo.	2	W	Pvt-Roman Catholic	369
Notre Dame College, Cleveland, Ohio	2	W	Pvt-Roman Catholic	548
Notre Dame College of Staten Island, N.Y.	2	W	Pvt-Roman Catholic	400
Notre Dame of Maryland, College of, Baltimore, Md.	2	Coed	Pvt-Roman Catholic	962
Nova Scotia Technical College, Halifax, Nova Scotia	4	Coed	Private	381
Nyack Missionary College, Nyack, N.Y.	2	Coed	Pvt-Christian & Missionary Alliance	548
Oakwood College, Huntsville, Ala.	2	Coed	Pvt-Seventh-day Adventist	370
Oberlin College, Oberlin, Ohio	3	Coed	Private	2,468
Occidental College, Los Angeles, Calif.	4	Coed	Private	1,566
Oceanside-Carlsbad College, Oceanside, Calif.	1	Coed	Public	1,634
Odessa College, Odessa, Texas	1	Coed	Public	1,832
Oglethorpe University, Atlanta, Ga.	2	Coed	Private	443
Ohio Northern University, Ada, Ohio	2	Coed	Pvt-Methodist	2,224
Ohio State University, The, Columbus, Ohio	4	Coed	Public	34,184
Ohio University, Athens, Ohio	4	Coed	Public	14,570
Ohio Wesleyan University, Delaware, Ohio	3	Coed	Pvt-Methodist	2,188
Oklahoma, University of, Norman, Okla.	4	Coed	Public	15,305
Oklahoma Baptist University, Shawnee, Okla.	2	Coed	Pvt-Baptist	1,401
Oklahoma City University, Oklahoma City, Okla.	2	Coed	Pvt-Methodist	2,276
Oklahoma College for Women, Chickasha, Okla.	2	W	Public	640
Oklahoma Military Academy, Claremore, Okla.	1	M	Public	321
Oklahoma State University of Agriculture & Applied Science, Stillwater, Okla.	4	Coed	Public	12,694

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Old Dominion College, Norfolk, Va	2	Coed	Public	5,275
Olivet College, Olivet, Mich	2	Coed	Private	606
Olivet Nazarene College, Kankakee, Ill	2	Coed	Pvt-Nazarene	1,247
Olympic College, Bremerton, Wash	1	Coed	Public	2,444
Omaha, Municipal University of, Omaha, Nebr	3	Coed	Public	8,138
Orange Coast College, Costa Mesa, Calif	1	Coed	Public	5,379
Orange County Community College, Middletown, N.Y	1	Coed	Public	571
Oregon, University of, Eugene, Oreg	4	Coed	Public	11,044
Oregon College of Education, Monmouth, Oreg	3	Coed	Public	1,344
Oregon State University, Corvallis, Oreg	4	Coed	Public	10,420
Oregon Technical Institute, Klamath Falls, Oreg	1	Coed	Public	908
Orlando Junior College, Orlando, Fla	1	Coed	Private	1,538
Osgoode Hall Law School, Toronto, Ontario	4	Coed	Private	444
Osteopathic Medicine & Surgery, College of, Des Moines, Iowa	2	Coed	Private	286
Otis Art Institute of Los Angeles County, Los Angeles, Calif	3	Coed	Public	241
Ottawa, University of, Ottawa, Ontario	4	Coed	Private	4,452
Ottawa University, Ottawa, Kans	2	Coed	Pvt-Baptist	716
Otterbein College, Westerville, Ohio	2	Coed	Pvt-Brethren	1,444
Ottumwa Heights College, Ottumwa, Iowa	1	W	Pvt-Roman Catholic	280
Ouachita Baptist College, Arkadelphia, Ark	3	Coed	Pvt-Baptist	1,351
Our Lady of Cincinnati College, Cincinnati, Ohio	2	W	Pvt-Roman Catholic	1,056
Our Lady of the Elms, College of, Chicopee, Mass	2	W	Pvt-Roman Catholic	858
Our Lady of the Lake College, San Antonio, Texas	3	W	Pvt-Roman Catholic	1,101
Owen College, Memphis, Tenn	1	Coed	Pvt-Baptist	318
Ozarks, The School of the, Point Lookout, Mo	1	Coed	Pvt-Presbyterian	509
Pace College, New York, N.Y	3	Coed	Private	6,241
Pacific, University of the, Stockton, Calif	4	Coed	Pvt-Methodist	2,758
Pacific Lutheran University, Tacoma, Wash	3	Coed	Pvt-Lutheran	1,989
Pacific Union College, Angwin, Calif	3	Coed	Pvt-Seventh-day Adventist	1,262
Pacific University, Forest Grove, Oreg	3	Coed	Public	983
Paducah Junior College, Paducah, Ky	1	Coed	Public	747
Paine College, Augusta, Ga	2	Coed	Pvt-Interdenominational	406
Palm Beach Junior College, Lake Worth, Fla	1	Coed	Public	3,084
Palmer College, Charleston, S.C	1	Coed	Private	657
Palo Verde Junior College, Blythe, Calif	1	Coed	Public	229
Palomar College, San Marcos, Calif	1	Coed	Public	2,879
Pan American College, Edinburg, Texas	2	Coed	Public	2,222
Panhandle Agricultural & Mechanical College, Goodwell, Okla	2	Coed	Public	845
Panola County Junior College, Carthage, Texas	1	Coed	Public	342
Paris Junior College, Paris, Texas	1	Coed	Public	429
Park College, Parkville, Mo	2	Coed	Pvt-Presbyterian	579
Parsons College, Fairfield, Iowa	2	Coed	Pvt-Presbyterian	2,567
Pasadena City College, Pasadena, Calif	1	Coed	Public	12,690
Pasadena College, Pasadena, Calif	3	Coed	Pvt-Nazarene	1,065
Paterson State College, Wayne, N.J	3	Coed	Public	3,775
Peabody Institute of the City of Baltimore, Md	4	Coed	Private	378
Pearl River Junior College, Poplarville, Miss	1	Coed	Public	559
Pembroke State College, Pembroke, N.C	2	Coed	Public	933
Pennsylvania, University of, Philadelphia, Pa	4	Coed	Private	18,611
Pennsylvania Military College, Chester, Pa	2	M	Private	2,124
Pennsylvania State University, University Park, Abingdon, Allentown, Altoona, Dubois, Erie, Hazelton, McKeesport, New Kensington, Pottsville, Scranton, Wilkes-Barre, Wyomissing, and York, Pa	4	Coed	Private-Public	23,188
Pensacola Junior College, Pensacola, Fla	1	Coed	Public	3,098
Pepperdine College, Los Angeles, Calif	3	Coed	Private	1,772
Perkinston College, Perkinston, Miss	1	Coed	Public	1,104
Peru State College, Peru, Nebr	2	Coed	Public	824
Pfeiffer College, Misenheimer, N.C	2	Coed	Pvt-Methodist	829
Philadelphia College of Bible, Philadelphia, Pa	2	Coed	Private	380
Philadelphia College of Osteopathy, Philadelphia, Pa	3	Coed	Private	329
Philadelphia College of Pharmacy & Science, Philadelphia, Pa	4	Coed	Private	618
Philadelphia College of Textiles & Science, Philadelphia, Pa	2	Coord	Private	684
Philadelphia College of Art, Philadelphia, Pa	2	Coed	Private	1,416
Philander Smith College, Little Rock, Ark	2	Coed	Pvt-Methodist	614
Phillips University, Enid, Okla	3	Coed	Pvt-Disciples of Christ	1,235
Phoenix College, Phoenix, Ariz	1	Coed	Public	9,101
Pikeville College, Pikeville, Ky	2	Coed	Pvt-Presbyterian	699
Pine Manor Junior College, Wellesley, Mass	1	W	Private	321
Pittsburgh, University of, Pittsburgh, Bradford, Greensburg, Johnstown, and Titusville, Pa	4	Coed	Private	15,498
Pittsburgh Theological Seminary, Pittsburgh, Pa	3	Coed	Pvt-Presbyterian	218
Plymouth State College, Plymouth, N.H	3	Coed	Public	1,193
Point Park Junior College, Pittsburgh, Pa	1	Coed	Private	1,861
Pomona College, Claremont, Calif	2	Coed	Private	1,096
Port Huron Junior College, Port Huron, Mich	1	Coed	Public	1,870
Porterville College, Porterville, Calif	1	Coed	Public	508
Portland, University of, Portland, Oreg	4	Coed	Pvt-Roman Catholic	1,750
Portland State College, Portland, Oreg	3	Coed	Public	6,712
Potomac State College of West Virginia University, Keyser, W.Va	1	Coed	Public	598
Prairie View Agricultural & Mechanical College, Prairie View, Texas	3	Coed	Public	3,412
Pratt Institute, Brooklyn, N.Y	3	Coed	Private	3,285
Presbyterian College, Clinton, S.C	2	Coed	Pvt-Presbyterian	504
Princeton Theological Seminary, Princeton, N.J	4	Coed	Pvt-Presbyterian	512
Princeton University, Princeton, N.J	4	M	Private	4,384
Principia College, Elsah, Ill	2	Coed	Private	552
Providence College, Providence, R.I	3	M	Pvt-Roman Catholic	2,932
Puerto Rico, University of, Río Piedras, P.R	3	Coed	Private	22,375
Puerto Rico Junior College, Río Piedras, P.R	1	Coed	Private	1,023
Puget Sound, University of, Tacoma, Wash	3	Coed	Pvt-Methodist	3,096
Purdue University, Lafayette, Ind	4	Coed	Public	22,675
Queens College (of the City University of New York), Flushing, N.Y	3	Coed	Public	14,544
Queens College, Charlotte, N.C	2	W	Pvt-Presbyterian	964
Queens University, Kingston, Ontario	4	Coed	Private	3,729
Queensborough Community College (of the City University of New York), Bayside, N.Y	1	Coed	Public	465
Quincy College, Quincy, Ill	2	Coed	Pvt-Roman Catholic	1,020
Quinnipiac College, Hamden, Conn	2	Coed	Private	1,632
Radcliffe College, Cambridge, Mass	2	W	Private	1,150
Radford College of Virginia Polytechnic Institute, Radford, Va	3	W	Public	2,994
Randolph-Macon College, Ashland, Va	2	M	Pvt-Methodist	676
Randolph-Macon Woman's College, Lynchburg, Va	2	W	Pvt-Methodist	740
Redlands, University of, Redlands, Calif	3	Coed	Pvt-Baptist	1,661
Reed College, Portland, Oreg	3	Coed	Private	974
Reedley College, Reedley, Calif	1	Coed	Public	717
Regis College, Denver, Colo	2	M	Pvt-Roman Catholic	1,010
Regis College, Weston, Mass	2	W	Pvt-Roman Catholic	789
Reinhardt College, Waleska, Ga	1	Coed	Pvt-Methodist	320
Rensselaer Polytechnic Institute, Troy, N.Y	4	Coed	Private	4,721
Rhode Island, University of, Kingston, R.I	4	Coed	Public	8,473
Rhode Island College, Providence, R.I	3	Coed	Public	3,370
Rhode Island School of Design, Providence, R.I	3	Coed	Private	912
Rice University, Houston, Texas	4	Coed	Private	2,242
Richmond, University of, Richmond, Va	3	Coord	Pvt-Baptist	3,771

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Richmond Professional Institute, Richmond, Va	3	Coed	Public	5,633
Ricks College, Rexburg, Idaho	1	Coed	Pvt-Latter-day Saints	1,536
Rider College, Trenton, N.J	3	Coed	Private	4,694
Ripon College, Ripon, Wis	2	Coed	Private	836
Riverside City College, Riverside, Calif	1	Coed	Public	5,575
Rivier College, Nashua, N.H	3	W	Pvt-Roman Catholic	646
Roanoke College, Salem, Va	2	Coed	Pvt-Lutheran	1,000
Robert Morris Junior College, Pittsburgh, Pa	1	Coed	Private	2,340
Roberts Wesleyan College, North Chili, N.Y	2	Coed	Pvt-Methodist	510
Rochester, University of, Rochester, N.Y	4	Coed	Private	7,265
Rochester Institute of Technology, Rochester, N.Y	3	Coed	Private	7,834
Rochester Junior College, Rochester, Minn	1	Coed	Public	850
Rockford College, Rockford, Ill	3	Coed	Private	1,204
Rockhurst College, Kansas City, Mo	2	M	Pvt-Roman Catholic	2,054
Rocky Mountain College, Billings, Mont	2	Coed	Pvt-Interdenominational	428
Rollins College, Winter Park, Fla	3	Coed	Private	2,605
Roosevelt University, Chicago, Ill	3	Coed	Private	6,080
Rosary College, River Forest, Ill	3	W	Pvt-Roman Catholic	1,109
Rosary Hill College, Buffalo, N.Y	2	W	Pvt-Roman Catholic	885
Rose Polytechnic Institute, Terre Haute, Ind	2	W	Pvt-Roman Catholic	574
Rosemont College, Rosemont, Pa	2	W	Pvt-Roman Catholic	623
Royal Military College, Kingston, Ontario	2	M	Public	1,069
Russell Sage College, Troy, N.Y	3	W	Private	3,122
Rutgers—The State University of New Jersey, New Brunswick, N.J. (incl. Douglass College)	4	Coord	Public	23,024
Sacramento City College, Sacramento, Calif	1	Coed	Public	5,679
Sacramento State College, Sacramento, Calif	3	Coed	Public	11,132
Sacred Heart, College of the, Santurce, P.R	2	W	Pvt-Roman Catholic	203
Sacred Heart Dominican College, Houston, Texas	2	W	Pvt-Roman Catholic	508
Sacred Heart Junior College & Academy, Belmont, N.C	1	W	Pvt-Roman Catholic	208
Sacred Heart Seminary, Detroit, Mich	2	M	Pvt-Roman Catholic	234
St. Ambrose College, Davenport, Iowa	2	Coord	Pvt-Roman Catholic	1,091
St. Andrews Presbyterian College, Laurinburg, N.C	2	Coed	Pvt-Presbyterian	898
St. Anselm's College, Manchester, N.H	2	Coord	Pvt-Roman Catholic	1,308
St. Augustine's College, Raleigh, N.C	2	Coed	Pvt-Protestant Episcopal	766
St. Benedict, College of, St. Joseph, Minn	2	W	Pvt-Roman Catholic	594
St. Benedict's College, Atchison, Kans	2	M	Pvt-Roman Catholic	669
St. Bernard College, St. Bernard, Ala	2	Coed	Pvt-Roman Catholic	505
St. Bernardine of Siena College, Loudonville, N.Y	3	M	Pvt-Roman Catholic	1,996
St. Bonaventure University, St. Bonaventure, N.Y	4	Coed	Pvt-Roman Catholic	2,197
St. Catherine, College of, St. Paul, Minn	2	W	Pvt-Roman Catholic	1,445
St. Cloud State College, St. Cloud, Minn	3	Coed	Public	5,065
St. Dunstan's University, Charlottetown, P.E.I	2	Coed	Pvt-Roman Catholic	510
St. Edward's University, Austin, Texas	2	M	Pvt-Roman Catholic	584
St. Elizabeth, College of, Convent Station, N.J	2	W	Pvt-Roman Catholic	909
St. Francis, College of, Joliet, Ill	2	W	Pvt-Roman Catholic	679
St. Francis College, Fort Wayne, Ind	3	Coed	Pvt-Roman Catholic	1,114
St. Francis College, Brooklyn, N.Y	2	M	Pvt-Roman Catholic	2,054
St. Francis College, Loretto, Pa	2	Coed	Pvt-Roman Catholic	1,271
St. Francis Seminary, Milwaukee, Wis	2	M	Pvt-Roman Catholic	296
St. Francis Xavier University, Antigonish, Nova Scotia	3	Coed	Pvt-Roman Catholic	1,790
St. John College of Cleveland, Ohio	3	W	Pvt-Roman Catholic	956
St. John Fisher College, Rochester, N.Y	2	M	Pvt-Roman Catholic	724
St. John's College, Winfield, Kans	1	Coed	Pvt-Lutheran	234
St. John's College, Annapolis, Md	3	Coed	Private	310
St. John's College, Camarillo, Calif	2	M	Pvt-Roman Catholic	358
St. John's River Junior College, Palatka, Fla	1	Coed	Public	982
St. John's University, Collegeville, Minn	2	M	Pvt-Roman Catholic	1,202
St. John's University, Jamaica, N.Y	4	Coed	Pvt-Roman Catholic	12,403
St. Joseph College, West Hartford, Conn	3	W	Pvt-Roman Catholic	814
St. Joseph College, Emmitsburg, Md	2	W	Pvt-Roman Catholic	613
St. Joseph Junior College, St. Joseph, Mo	1	Coed	Public	609
St. Joseph on the Rio Grande, College of, Albuquerque, N.Mex	2	Coed	Pvt-Roman Catholic	628
St. Joseph's College, North Windham, Me	2	W	Pvt-Roman Catholic	229
St. Joseph's College, Rensselaer, Ind	2	M	Pvt-Roman Catholic	2,160
St. Joseph's College, Philadelphia, Pa	3	M	Pvt-Roman Catholic	5,335
St. Joseph's College for Women, Brooklyn, N.Y	2	W	Pvt-Roman Catholic	703
St. Joseph's Seminary & College, Yonkers, N.Y	3	M	Pvt-Roman Catholic	316
St. Joseph's University, St. Joseph & Moncton, New Brunswick	3	Coed	Pvt-Roman Catholic	600
St. Lawrence University, Canton, N.Y	3	Coed	Private	1,696
St. Louis College of Pharmacy, St. Louis, Mo	3	Coed	Private	351
St. Louis University, St. Louis, Mo. (incl. St. Mary's College, St. Mary's, Kans.)	4	Coed	Pvt-Roman Catholic	9,844
St. Martin's College, Olympia, Wash	2	M	Pvt-Roman Catholic	449
St. Mary, College of, Omaha, Nebr	2	W	Pvt-Roman Catholic	555
St. Mary College, Xavier, Kans	3	W	Pvt-Roman Catholic	655
St. Mary of the Plains College, Dodge City, Kans	2	Coed	Pvt-Roman Catholic	486
St. Mary of the Springs, College of, Columbus, Ohio	2	W	Pvt-Roman Catholic	541
St. Mary-of-the-Woods College, St. Mary-of-the-Woods, Ind	2	W	Pvt-Roman Catholic	662
St. Mary's College, Notre Dame, Ind	4	W	Pvt-Roman Catholic	1,133
St. Mary's College, Winona, Minn	3	M	Pvt-Roman Catholic	1,045
St. Mary's College of California, St. Mary's College, Calif	2	M	Pvt-Roman Catholic	875
St. Mary's College of Maryland, St. Mary's City, Md	1	Coed	Public	268
St. Mary's Dominican College, New Orleans, La	2	W	Pvt-Roman Catholic	430
St. Mary's Junior College, Raleigh, N.C	1	W	Pvt-Protestant Episcopal	275
St. Mary's Seminary & University, Baltimore, Md	4	M	Pvt-Roman Catholic	833
St. Mary's University of San Antonio, Texas	3	Coed	Pvt-Roman Catholic	2,631
St. Meinrad Seminary, St. Meinrad, Ind	2	M	Pvt-Roman Catholic	375
St. Michael's College, University of, Toronto, Ontario	2	Coed	Pvt-Roman Catholic	1,480
St. Michael's College, Winooski, Vt	3	M	Pvt-Roman Catholic	1,181
St. Norbert College, West De Pere, Wis	2	Coed	Pvt-Roman Catholic	1,225
St. Olaf College, Northfield, Minn	2	Coed	Pvt-Lutheran	2,073
St. Patrick's Seminary, Menlo Park, Calif	2	M	Pvt-Roman Catholic	252
St. Paul Bible College, St. Paul, Minn	2	Coed	Pvt-Christian & Missionary Alliance	271
St. Paul Seminary, St. Paul, Minn	3	M	Pvt-Roman Catholic	262
St. Paul's College, Lawrenceville, Va	2	Coed	Pvt-Protestant Episcopal	456
St. Paul's College (of the University of Manitoba), Winnipeg, Manitoba	3	Coord	Pvt-Roman Catholic	436
St. Peter's College, Jersey City, N.J	2	M	Pvt-Roman Catholic	2,208
St. Petersburg Junior College, St. Petersburg, Fla	1	Coed	Public	5,036
St. Philip's College, San Antonio, Texas	1	Coed	Public	679
St. Procopius College, Lisle, Ill	2	M	Pvt-Roman Catholic	741
St. Rose, College of, Albany, N.Y	3	W	Pvt-Roman Catholic	1,434
St. Scholastica, College of, Duluth, Minn	2	W	Pvt-Roman Catholic	469
St. Teresa, College of, Winona, Minn	2	W	Pvt-Roman Catholic	1,014
St. Thomas, College of, St. Paul, Minn	3	M	Pvt-Roman Catholic	1,906
St. Thomas, University of, Houston, Texas	2	Coed	Pvt-Roman Catholic	692
St. Thomas Seminary, Denver, Colo	2	M	Pvt-Roman Catholic	243
St. Vincent College, Latrobe, Pa	3	M	Pvt-Roman Catholic	878
St. Xavier College, Chicago, Ill	2	W	Pvt-Roman Catholic	992
Salem College, Winston-Salem, N.C	2	W	Pvt-Moravian	490
Salem College, Salem, W.Va	2	Coed	Pvt-Baptist	935
Salisbury State College, Salisbury, Md	3	Coed	Public	524
Salmon P. Chase College, School of Law, Cincinnati, Ohio	2	Coed	Pvt-YMCA	225
Salve Regina College, Newport, R.I	2	W	Pvt-Roman Catholic	586
Sam Houston State Teachers College, Huntsville, Texas	3	Coed	Public	5,390
San Angelo College, San Angelo, Texas	1	Coed	Public	1,385
San Antonio College, San Antonio, Texas	1	Coed	Public	6,977
San Bernardino Valley College, San Bernardino, Calif	1	Coed	Public	9,096

Name and Location	Level of Instruction	Student Body	Control	Enrollment
San Diego, University of, College for Men, San Diego, Calif	2	M	Pvt-Roman Catholic	287
San Diego College for Women, San Diego, Calif	3	W	Pvt-Roman Catholic	667
San Diego State College, San Diego, Calif	3	Coed	Public	16,097
San Fernando Valley State College, Northridge, Calif	3	Coed	Public	10,454
San Francisco, City College of, San Francisco, Calif	1	Coed	Public	5,909
San Francisco, University of, San Francisco, Calif	3	M	Pvt-Roman Catholic	4,491
San Francisco Art Institute College, San Francisco, Calif	3	W	Private	583
San Francisco College for Women, San Francisco, Calif	3	W	Pvt-Roman Catholic	601
San Francisco State College, San Francisco, Calif	3	Coed	Public	20,749
San Francisco Theological Seminary, San Anselmo, Calif	4	Coed	Pvt-Presbyterian	257
San Joaquin Delta College, Stockton, Calif	1	Coed	Public	2,284
San Jose City College, San Jose, Calif	1	Coed	Public	10,859
San Jose State College, San Jose, Calif	3	Coed	Public	22,735
San Mateo, College of, San Mateo, Calif	1	Coed	Public	9,468
Santa Ana College, Santa Ana, Calif	1	Coed	Public	4,728
Santa Barbara City College, Santa Barbara, Calif	1	Coed	Public	2,076
Santa Clara, University of, Santa Clara, Calif	3	Coed	Pvt-Roman Catholic	3,517
Santa Monica City College, Santa Monica, Calif	1	Coed	Public	10,282
Santa Rosa Junior College, Santa Rosa, Calif	1	Coed	Public	3,754
Sarah Lawrence College, Bronxville, N.Y	3	W	Private	599
Saskatchewan, University of, Saskatoon, Sask	4	Coed	Public	7,623
Savannah State College, Savannah, Ga	2	Coed	Public	1,151
Scranton, University of, Scranton, Pa	3	M	Pvt-Roman Catholic	2,690
Scripps College, Claremont, Calif	2	W	Private	334
Seattle Pacific College, Seattle, Wash	3	Coed	Pvt-Methodist	1,730
Seattle University, Seattle, Wash	3	Coed	Pvt-Roman Catholic	3,970
Sequoias, College of the, Visalia, Calif	1	Coed	Public	3,187
Seton Hall University, South Orange, N.J	3	Coord	Pvt-Roman Catholic	8,929
Seton Hill College, Greensburg, Pa	2	W	Pvt-Roman Catholic	902
Shasta College, Redding, Calif	1	Coed	Public	1,472
Shaw University, Raleigh, N.C	2	Coed	Pvt-Baptist	641
Shenandoah College & Shenandoah Conservatory of Music, Winchester, Va	2	Coed	Pvt-Brethren	384
Shepherd College, Shepherdstown, W.Va	2	Coed	Public	1,032
Sherbrooke, Université de, Sherbrooke, Quebec	3	Coed	Pvt-Roman Catholic	3,160
Shimer College, Mount Carroll, Ill	2	Coed	Private	325
Shippensburg State College, Shippensburg, Pa	3	Coed	Public	2,054
Shorter College, Rome, Ga	2	Coed	Pvt-Baptist	749
Siena College, Memphis, Tenn	2	W	Pvt-Roman Catholic	304
Siena Heights College, Adrian, Mich	3	W	Pvt-Roman Catholic	681
Sierra College, Rocklin, Calif	1	Coed	Public	876
Simmons College, Boston, Mass	3	W	Private	1,593
Simpson College, Indianola, Iowa	2	Coed	Pvt-Methodist	750
Sinclair College, Dayton, Ohio	1	Coed	Private	1,150
Sioux Falls College, Sioux Falls, S.Dak	2	Coed	Pvt-Baptist	776
Sir George Williams University, Montreal, P.Q	2	Coed	Pvt-YMCA	3,016
Siskiyous, College of the, Weed, Calif	1	Coed	Public	692
Skagit Valley College, Mount Vernon, Wash	1	Coed	Public	868
Skidmore College, Saratoga Springs, N.Y	2	W	Private	1,265
Slippery Rock State College, Slippery Rock, Pa	2	Coed	Public	2,155
Smith College, Northampton, Mass	3	W	Private	2,432
Snead Junior College, Boaz, Ala	1	Coed	Pvt-Methodist	510
Sonoma State College, Rohnert Park, Calif	2	Coed	Public	1,189
South, University of the, Sewanee, Tenn	3	M	Pvt-Protestant Episcopal	821
South Carolina, Medical College of, Charleston, S.C	4	Coed	Public	635
South Carolina, University of, Columbia, S.C	4	Coed	Public	8,332
South Carolina State College, Orangeburg, S.C	3	Coed	Public	2,351
South Dakota, University of, Vermillion, S. Dak	4	Coed	Public	3,287

Name and Location	Level of Instruction	Student Body	Control	Enrollment
South Dakota School of Mines & Technology, Rapid City, S.Dak	3	Coed	Public	1,078
South Dakota State University, Brookings, S.Dak	4	Coed	Public	3,714
South Georgia College, Douglas, Ga	1	Coed	Public	648
South Plains College, Levelland, Texas	1	Coed	Public	789
South Texas College, Houston, Texas	2	Coed	Pvt-YMCA	1,779
Southeast Missouri State College, Cape Girardeau Mo	2	Coed	Public	4,105
Southeastern Baptist Theological Seminary, Wake Forest, N.C	3	Coed	Pvt-Baptist	575
South-Eastern Bible College, Lakeland, Fla	2	Coed	Pvt-Assemblies of God	247
Southeastern Louisiana College, Hammond, La	3	Coed	Public	3,529
Southeastern State College, Durant, Okla	3	Coed	Public	2,337
Southeastern University, Washington, D.C	2	Coed	Private	441
Southern Baptist College, Walnut Ridge, Ark	1	Coed	Pvt-Baptist	248
Southern Baptist Theological Seminary, Louisville, Ky	4	Coed	Pvt-Baptist	817
Southern California, University of, Los Angeles, Calif	4	Coed	Private	19,226
Southern California College, Costa Mesa, Calif	2	Coed	Pvt-Assemblies of God	330
Southern College of Optometry, Memphis, Tenn	2	Coed	Private	232
Southern Colorado State College, Pueblo, Colo	1	Coed	Public	3,260
Southern Connecticut State College, New Haven, Conn	3	Coed	Public	4,853
Southern Illinois University, Carbondale, Ill	4	Coed	Public	18,535
Southern Methodist University, Dallas, Texas	4	Coed	Pvt-Methodist	7,456
Southern Missionary College, Collegedale, Tenn	2	Coed	Pvt-Seventh-day Adventist	803
Southern Mississippi, University of, Hattiesburg, Miss	4	Coed	Public	6,035
Southern Oregon College, Ashland, Oreg	3	Coed	Public	2,090
Southern State College, Magnolia, Ark	2	Coed	Public	1,628
Southern State Teachers College, Springfield, S.Dak	2	Coed	Public	630
Southern University & Agricultural & Mechanical College, Baton Rouge, La	3	Coed	Public	6,326
Southwest Baptist College, Bolivar, Mo	1	Coed	Pvt-Baptist	496
Southwest Mississippi Junior College, Summit, Miss	1	Coed	Public	341
Southwest Missouri State College, Springfield, Mo	2	Coed	Public	3,803
Southwest Texas Junior College, Uvalde, Texas	1	Coed	Public	524
Southwest Texas State College, San Marcos, Texas	3	Coed	Public	3,850
Southwestern Assemblies of God College, Waxahachie, Texas	2	Coed	Pvt-Assemblies of God	393
Southwestern at Memphis, Tenn	2	Coed	Pvt-Presbyterian	870
Southwestern Baptist Theological Seminary, Fort Worth, Texas	4	Coed	Pvt-Baptist	1,668
Southwestern College, Chula Vista, Calif	1	Coed	Public	1,354
Southwestern College, Winfield, Kans	2	Coed	Pvt-Methodist	660
Southwestern Louisiana, University of, Lafayette, La	3	Coed	Public	6,020
Southwestern State College, Weatherford, Okla	3	Coed	Public	3,050
Southwestern Union College, Keene, Texas	1	Coed	Pvt-Seventh-day Adventist	240
Southwestern University, Georgetown, Texas	2	Coed	Pvt-Methodist	742
Spartanburg Junior College, Spartanburg, S.C	1	Coed	Pvt-Methodist	514
Spelman College, Atlanta, Ga	2	W	Pvt-Baptist	587
Spring Arbor College, Spring Arbor, Mich	1	Coed	Pvt-Methodist	367
Spring Hill College, Mobile, Ala	3	Coed	Pvt-Roman Catholic	1,364
Springfield College, Springfield, Mass	4	Coed	Private	1,783
Springfield Junior College, Springfield, Ill	1	Coed	Pvt-Roman Catholic	675
Stanford University, Palo Alto, Calif	4	Coed	Private	10,450
Stanislaus State College, Turlock, Calif	3	Coed	Public	993
Staten Island Community College, Staten Island, N.Y	1	Coed	Public	715
Stephen F. Austin State College, Nacogdoches, Texas	3	Coed	Public	3,335
Stephens College, Columbia, Mo	2	W	Private	1,772
Stephens Henager College, Salt Lake City, Utah	1	Coed	Private	841
Sterling College, Sterling, Kans	2	Coed	Pvt-Presbyterian	544
Stetson University, De Land, Fla	3	Coed	Pvt-Baptist	2,105
Steubenville, College of, Steubenville, Ohio	2	Coed	Pvt-Roman Catholic	832
Stevens Institute of Technology, Hoboken, N.J	4	M	Private	2,280
Stillman College, Tuscaloosa, Ala	2	Coed	Pvt-Presbyterian	522

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Stonehill College, North Easton, Mass	2	Coed	Pvt-Roman Catholic	1,032
Stout State College, Menomonie, Wis	3	Coed	Public	1,867
Strayer Junior College, Washington, D.C	1	Coed	Private	498
Sue Bennett College, London, Ky	1	Coed	Pvt-Methodist	226
Suffolk University, Boston, Mass	3	Coed	Private	2,083
Sul Ross State College, Alpine, Texas	3	Coed	Public	1,377
Sullins College, Bristol, Va	1	W	Private	340
Sulpician Seminary of the Northwest, Kenmore, Wash	2	M	Pvt-Roman Catholic	200
Susquehanna University, Selinsgrove, Pa	2	Coed	Pvt-Lutheran	1,065
Swarthmore College, Swarthmore, Pa	3	Coed	Private	994
Sweet Briar College, Sweet Briar, Va	2	W	Private	687
Syracuse University, Syracuse, N.Y	4	Coed	Private	19,918
Taft College, Taft, Calif	1	Coed	Public	554
Talladega College, Talladega, Ala	2	Coed	Private	410
Tampa, University of, Tampa, Fla	2	Coed	Private	2,484
Tarkio College, Tarkio, Mo	2	Coed	Pvt-Presbyterian	652
Tarlton State College, Stephenville, Texas	2	Coed	Public	1,419
Taylor University, Upland, Ind	2	Coed	Private	848
Temple Junior College, Temple, Texas	1	Coed	Public	814
Temple University, Philadelphia, Pa	4	Coed	Private	23,030
Tennessee, University of, Knoxville, Tenn	4	Coed	Public	18,221
Tennessee Agricultural & Industrial State University, Nashville, Tenn	3	Coed	Public	4,240
Tennessee Polytechnic Institute, Cookeville, Tenn	3	Coed	Public	3,969
Tennessee Wesleyan College, Athens, Tenn	2	Coed	Pvt-Methodist	686
Texarkana College, Texarkana, Texas	1	Coed	Public	1,252
Texas, University of, Austin, Texas	4	Coed	Public	24,772
Texas Agricultural & Mechanical University, College Station, Texas	4	Coord	Public	8,175
Texas Christian University, Fort Worth, Texas	4	Coed	Pvt-Christian	6,963
Texas College of Arts and Industries, Kingsville, Texas	3	Coed	Public	4,100
Texas Lutheran College, Seguin, Texas	2	Coed	Pvt-Lutheran	648
Texas Southern University, Houston, Texas	3	Coed	Public	4,037
Texas Southmost College, Brownsville, Texas	1	Coed	Public	690
Texas Technological College, Lubbock, Texas	4	Coed	Public	12,036
Texas Wesleyan College, Fort Worth, Texas	3	Coed	Pvt-Methodist	1,506
Texas Western College (of the University of Texas), El Paso, Texas	3	Coed	Public	6,155
Texas Woman's University, Denton, Texas	4	W	Public	3,196
Thiel College, Greenville, Pa	2	Coed	Pvt-Lutheran	943
Thornton Junior College, Harvey, Ill	1	Coed	Public	1,826
Tiffin University, Tiffin, Ohio	2	Coed	Private	245
Tift College, Forsyth, Ga	2	W	Pvt-Baptist	570
Toledo, University of, Toledo, Ohio	4	Coed	Public	6,744
Toronto, University of, Toronto, Ontario	4	Coed	Public	16,936
Tougaloo College, Tougaloo, Miss	2	Coed	Pvt-Interdenominational	521
Towson State College, Baltimore, Md	3	Coed	Public	2,653
Transylvania College, Lexington, Ky	2	Coed	Private	650
Trenton Junior College, Trenton, N.J	1	Coed	Public	1,372
Trenton State College, Trenton, N.J	3	Coed	Public	5,818
Trinidad State Junior College, Trinidad, Colo	1	Coed	Public	607
Trinity College, Hartford, Conn	3	M	Private	1,501
Trinity College, Washington, D.C	2	W	Pvt-Roman Catholic	847
Trinity College, Burlington, Vt	2	W	Pvt-Roman Catholic	419
Trinity University, San Antonio, Texas	3	Coed	Pvt-Presbyterian	1,959
Troy State College, Troy, Ala	3	Coed	Public	2,596
Tufts University, Medford, Mass	4	Coed	Private	4,903
Tulane University of Louisiana, New Orleans, La	4	Coed	Private	7,460
Tulsa, University of, Tulsa, Okla	4	Coed	Private	5,300
Tusculum College, Greeneville, Tenn	2	Coed	Private	513
Tuskegee Institute, Tuskegee Institute, Ala	3	Coed	Private	2,482
Tyler Junior College, Tyler, Texas	1	Coed	Public	2,191
Union College, Barbourville, Ky	3	Coed	Pvt-Methodist	749
Union College, Lincoln, Nebr	2	Coed	Pvt-Seventh-day Adventist	936
Union College and University, Schenectady, N.Y	4	M	Private	2,718
Union Junior College, Cranford, N.J	1	Coed	Private	1,322
Union Theological Seminary, New York, N.Y	4	Coed	Pvt-Interdenominational	514
Union Theological Seminary, Richmond, Va	1	M	Pvt-Presbyterian	204
Union University, Jackson, Tenn	2	Coed	Pvt-Baptist	709
United College (of the University of Manitoba), Winnipeg, Manitoba	3	Coed	Pvt-United Church	1,480
United States Air Force Academy, Colorado Springs, Colo	2	M	Public	2,618
United States Coast Guard Academy, New London, Conn	2	M	Public	599
United States Merchant Marine Academy, Kings Point, N.Y	2	M	Public	977
United States Military Academy, West Point, N.Y	2	M	Public	2,615
United States Naval Academy, Annapolis, Md	2	M	Public	4,084
United States Naval Postgraduate School, Monterey, Calif	4	M	Public	1,562
Upper Iowa University, Fayette, Iowa	2	Coed	Private	1,124
Upsala College, East Orange, N.J	2	Coed	Pvt-Lutheran	1,916
Ursinus College, Collegeville, Pa	2	Coed	Private	969
Ursuline College, Louisville, Ky	2	W	Pvt-Roman Catholic	472
Ursuline College, Cleveland, Ohio	2	W	Pvt-Roman Catholic	310
Utah, University of, Salt Lake City, Utah (incl. Carbon College)	4	Coed	Public	14,338
Utah State University of Agriculture & Applied Science, Logan, Utah (incl. Snow College, Ephraim)	4	Coed	Public	7,759
Valdosta State College, Valdosta, Ga	2	Coed	Public	1,146
Vallejo Junior College, Vallejo, Calif	1	Coed	Public	1,774
Valley City State College, Valley City, N.Dak	2	Coed	Public	975
Valley Forge Military Junior College, Wayne, Pa	1	M	Private	204
Valparaiso University, Valparaiso, Ind	3	Coed	Pvt-Lutheran	3,574
Vanderbilt University, Nashville, Tenn	4	Coed	Private	4,370
Vassar College, Poughkeepsie, N.Y	3	W	Private	1,619
Ventura College, Ventura, Calif	1	Coed	Public	5,163
Vermont, University of, & State Agricultural College, Burlington, Vt	4	Coed	Public	3,974
Vermont College, Montpelier, Vt	1	W	Private	308
Victor Valley College, Victorville, Calif	1	Coed	Public	899
Victoria, University of, Victoria, British Columbia	4	Coed	Public	2,028
Victoria College, Victoria, Texas	1	Coed	Public	1,055
Victoria University, Toronto, Ontario	4	Coed	Pvt-United Church	2,339
Villa Madonna College, Covington, Ky	2	Coed	Pvt-Roman Catholic	1,450
Villa Maria College, Erie, Pa	2	W	Pvt-Roman Catholic	748
Villanova University, Villanova, Pa	3	M	Pvt-Roman Catholic	7,105
Vincennes University, Vincennes, Ind	1	Coed	Public	689
Virginia, Medical College of, Richmond, Va	4	Coed	Public	1,120
Virginia, University of, Charlottesville, Va. (incl. Mary Washington College, Fredericksburg)	4	Coord	Public	12,506
Virginia Intermont College, Bristol, Va	1	W	Pvt-Baptist	318
Virginia Junior College, Virginia, Minn	1	Coed	Public	438
Virginia Military Institute, Lexington, Va	2	M	Public	1,143
Virginia Polytechnic Institute, Blacksburg, Va	4	Coed	Public	8,655
Virginia State College, Petersburg, Va	3	Coed	Public	4,717
Virginia Union University, Richmond, Va	2	Coed	Pvt-Baptist	1,241
Viterbo College, La Crosse, Wis	2	W	Pvt-Roman Catholic	430
Wabash College, Crawfordsville, Ind	2	M	Private	837
Wagner College, Staten Island, N.Y	3	Coed	Pvt-Lutheran	2,173
Wake Forest College, Winston-Salem, N.C	3	Coord	Pvt-Baptist	2,958

Name and Location	Level of Instruction	Student Body	Control	Enrollment
Waldorf College, Forest City, Iowa	1	Coed	Pvt-Lutheran	418
Walker College, Jasper, Ala	1	Coed	Private	356
Walla Walla College, College Place, Wash	3	Coed	Pvt-Seventh-day Adventist	1,441
Warner Pacific College, Portland, Oreg	2	Coed	Pvt-Church of God	266
Warren Wilson College, Swannanoa, N.C	1	Coed	Pvt-Presbyterian	286
Wartburg College, Waverly, Iowa	2	Coed	Pvt-Lutheran	1,179
Wartburg Theological Seminary, Dubuque, Iowa	3	M	Pvt-Lutheran	206
Washburn University of Topeka, Kans	3	Coed	Public	3,933
Washington, University of, Seattle, Wash	4	Coed	Public	26,880
Washington and Jefferson College, Washington, Pa	3	M	Private	823
Washington and Lee University, Lexington, Va	2	M	Private	1,256
Washington College, Chesterton, Md	2	Coed	Private	512
Washington State University, Pullman, Wash	4	Coed	Public	8,792
Washington University, St. Louis, Mo	4	Coed	Private	14,034
Waterloo, University of, Waterloo, Ontario	4	Coed	Private	2,289
Waterloo Lutheran University, Waterloo, Ontario	4	Coed	Pvt-Lutheran	1,297
Wayland Baptist College, Plainview, Texas	2	Coed	Pvt-Baptist	698
Wayne State College, Wayne, Nebr	3	Coed	Public	1,799
Wayne State University, Detroit, Mich	4	Coed	Public	22,310
Waynesburg College, Waynesburg, Pa	2	Coed	Pvt-Presbyterian	1,018
Weatherford College, Weatherford, Texas	1	Coed	Public	558
Weber State College, Ogden, Utah	1	Coed	Public	4,268
Webster College, Webster Groves, Mo	2	W	Pvt-Roman Catholic	770
Wellesley College, Wellesley, Mass	3	W	Private	1,734
Wells College, Aurora, N.Y	3	W	Private	553
Wenatchee Valley College, Wenatchee, Wash	1	Coed	Public	891
Wentworth Military Academy, Lexington, Mo	1	M	Private	200
Wesley College, Dover, Del	1	Coed	Pvt-Methodist	496
Wesley Theological Seminary, Washington, D.C	3	Coed	Pvt-Methodist	234
Wesleyan College, Macon, Ga	2	W	Pvt-Methodist	596
Wesleyan University, Middletown, Conn	3	M	Private	1,208
West Chester State College, West Chester, Pa	3	Coed	Public	4,205
West Coast University, Los Angeles, Calif	3	Coed	Private	514
West Liberty State College, West Liberty, W.Va	2	Coed	Public	1,822
West Georgia College, Carrollton, Ga	2	Coed	Public	1,216
West Texas State University, Canyon, Texas	3	Coed	Public	4,202
West Virginia Institute of Technology, Montgomery, W.Va	2	Coed	Public	1,172
West Virginia State College, Institute, W.Va	2	Coed	Public	2,487
West Virginia University, Morgantown, W.Va	4	Coed	Public	9,854
West Virginia Wesleyan College, Buckhannon, W.Va	2	Coed	Pvt-Methodist	1,345
Western Carolina College, Cullowhee, N.C	3	Coed	Public	2,638
Western College for Women, Oxford, Ohio	2	W	Private	463
Western Illinois University, Macomb, Ill	3	Coed	Public	4,633
Western Kentucky State College, Bowling Green, Ky	3	Coed	Public	6,157
Western Maryland College, Westminster, Md	3	Coed	Pvt-Methodist	1,008
Western Michigan University, Kalamazoo, Mich	3	Coed	Public	13,514
Western Montana College of Education, Dillon, Mont	3	Coed	Public	733
Western New Mexico University, Silver City, N.Mex	3	Coed	Public	1,157
Western Ontario, University of, London, Ontario	4	Coed	Private	5,765
Western Reserve University, Cleveland, Ohio	4	Coed	Private	8,229
Western State College of Colorado, Gunnison, Colo	3	Coed	Public	1,924
Western Washington State College, Bellingham, Wash	3	Coed	Public	4,198
Westmar College, Le Mars, Iowa	2	Coed	Pvt-Brethren	763
Westminster Choir College, Princeton, N.J	3	Coed	Private	283
Westminster College, Fulton, Mo	2	M	Pvt-Presbyterian	649
Westminster College, New Wilmington, Pa	3	Coed	Pvt-Presbyterian	1,642
Westminster College, Salt Lake City, Utah	2	Coed	Pvt-Interdenominational	429
Westmont College, Santa Barbara, Calif	2	Coed	Private	540
Wharton County Junior College, Wharton, Texas	1	Coed	Public	1,328
Wheaton College, Wheaton, Ill	3	Coed	Private	1,857
Wheaton College, Norton, Mass	2	W	Private	882
Wheeling College, Wheeling, W.Va	2	Coed	Pvt-Roman Catholic	565
Wheelock College, Boston, Mass	3	W	Private	536
Whitman College, Walla Walla, Wash	2	Coed	Private	930
Whittier College, Whittier, Calif	3	Coed	Private	1,608
Whitworth College, Spokane, Wash	3	Coed	Private	1,746
Wichita State University, Wichita, Kans	4	Coed	Public	6,718
Wilberforce University, Wilberforce, Ohio	2	Coed	Pvt-Methodist Episcopal	433
Wiley College, Marshall, Texas	2	Coed	Pvt-Methodist	545
Wilkes College, Wilkes-Barre, Pa	3	Coed	Private	1,735
Willamette University, Salem, Oreg	3	Coed	Pvt-Methodist	1,439
William and Mary, College of, Williamsburg, Va	3	Coed	Public	5,959
William Carey College, Hattiesburg, Miss	2	Coed	Pvt-Baptist	642
William Jewell College, Liberty, Mo	2	Coed	Pvt-Baptist	911
William Mitchell College of Law, St. Paul, Minn	2	Coed	Private	334
William Penn College, Oskaloosa, Iowa	2	Coed	Pvt-Friends	682
William Woods College, Fulton, Mo	2	W	Pvt-Disciples of Christ	550
Williams College, Williamstown, Mass	3	M	Private	1,249
Willimantic State College, Willimantic, Conn	3	Coed	Public	1,114
Wilmington College, Wilmington, N.C	1	Coed	Public	891
Wilmington College, Wilmington, Ohio	2	Coed	Pvt-Friends	858
Wilson College, Chambersburg, Pa	2	W	Private	576
Windsor, University of, Windsor, Ont	4	Coed	Private	1,820
Wingate College, Wingate, N.C	1	Coed	Pvt-Baptist	951
Winona State College, Winona, Minn	3	Coed	Public	2,137
Winston-Salem State College, Winston-Salem, N.C	2	Coed	Public	1,160
Winthrop College, Rock Hill, S.C	3	W	Public	2,304
Wisconsin, University of, Madison & Milwaukee, Wis	4	Coed	Public	38,883
Wisconsin State University—Eau Claire, Wis	3	Coed	Public	3,220
Wisconsin State University—La Crosse, Wis	3	Coed	Public	2,498
Wisconsin State University—Oshkosh, Wis	2	Coed	Public	4,873
Wisconsin State University—Platteville, Wis	2	Coed	Public	2,832
Wisconsin State University—River Falls, Wis	2	Coed	Public	2,358
Wisconsin State University—Stevens Point, Wis	2	Coed	Public	3,260
Wisconsin State University—Superior, Wis	3	Coed	Public	1,682
Wisconsin State University—Whitewater, Wis	2	Coed	Public	4,208
Wittenberg University, Springfield, Ohio	3	Coed	Pvt-Lutheran	2,981
Wofford College, Spartanburg, S.C	2	M	Pvt-Methodist	961
Woman's Medical College of Philadelphia, Pa	4	W	Private	220
Woodbury College, Los Angeles, Calif	2	Coed	Private	1,681
Woodstock College, Woodstock, Md	4	M	Pvt-Roman Catholic	253
Wooster, College of, Wooster, Ohio	2	Coed	Pvt-Presbyterian	1,465
Worcester Junior College, Worcester, Mass	1	Coed	Private	2,403
Worcester Polytechnic Institute, Worcester, Mass	4	M	Private	1,424
Wyoming, University of, Laramie, Wyo	4	Coed	Public	5,996
Xavier University, New Orleans, La	3	Coed	Pvt-Roman Catholic	779
Xavier University, Cincinnati, Ohio	3	M	Pvt-Roman Catholic	4,143
Yakima Valley College, Yakima, Wash	1	Coed	Public	1,805
Yale University, New Haven, Conn	4	M	Private	8,343
Yankton College, Yankton, S.Dak	2	Coed	Private	373
Yeshiva University, New York, N.Y	4	Coed	Pvt-Jewish	3,430
York Junior College, York, Pa	1	Coed	Private	1,167
York University, Toronto, Ont	4	Coed	Public	506
Young Harris College, Young Harris, Ga	1	Coed	Pvt-Methodist	594
Youngstown University, Youngstown, Ohio	2	Coed	Private	8,954
Yuba College, Marysville, Calif	1	Coed	Public	2,736

[1] Included in enrollment for Columbia University. [2] Included in University of Utah. [3] Included under Rutgers University. [4] Included under University of Virginia. [5] Included under University of Maryland.

COLOMBIA

Political inaction during most of 1965 by a government preoccupied with elections scheduled for 1966 contributed to worsening economic conditions in Colombia. Kidnappings and terrorism added to the country's general unrest. Late in the year the government made a new effort to stimulate economic recovery and enlist outside financial support.

Political Deadlocks. The political stalemate hardened after December 1964, when the United States, the International Bank for Reconstruction and Development, and the International Monetary Fund denied further credits to Colombia until the government made drastic economic reforms. President Guillermo León Valencia, a Conservative, at first refused to devalue the peso for fear of increasing inflation. His own economic proposals were rejected by Congress, split among numerous factions of the Liberal and Conservative parties. Congressional members repeatedly demanded his resignation.

The cabinet likewise could not act because its members often disagreed with the president's policies. Gen. Alberto Ruiz Novoa, minister of war, was removed from office on January 27, because it was feared that his political activities might lead to a military coup. He later became a presidential candidate. Two successive ministers of finance resigned in disputes over economic policy. Finally, in August, 11 of the 13 cabinet members resigned, precipitating the third major reshuffle during Valencia's term of office.

Economic Problems. The economic crisis threatened to turn into a depression when the government curtailed imports in order to conserve dwindling currency reserves. This action cut off raw materials, forced some factories to shut down, and increased unemployment. Protesting shortages and price increases, the Union of Colombian Workers, a federation of 45 of the country's largest unions, threatened a general strike for January 25 and again for October 1. Appeals by the president averted these strikes, but labor protests continued.

UPI

COLOMBIAN STUDENTS riot in Bogotá, Colombia, in May, protesting U.S. intervention in the Dominican Republic.

Colombia's economic problem was partially alleviated in 1965 by favorable prices for coffee. The country had a trade deficit of $38 million in 1964, but achieved a surplus of $53 million in the first half of 1965. The domestic growth rate, which reached 6% in 1964, declined in 1965.

Economic Policies. On September 1, President Valencia put into effect by decree a new economic program. He authorized a partial devaluation of the peso and imposed new taxes and restrictions on nonessential imports. Consumer prices rose sharply following the devaluation, but the new policies enabled Colombia to qualify for renewed financial assistance. The United States Agency for International Development and three other international lending agencies gave assurances that if the new measures were maintained, Colombia would receive $322 million in loan support during 1966.

Kidnappings. A series of kidnappings of wealthy Colombians terrorized Bogotá and rural areas in 1965 as extortionists used this means to raise funds, sometimes for political motives. Harold J. Eder, a prominent industrialist and landowner, was abducted and slain in March. During the first half of the year an estimated 400 persons were kidnapped.

COLOMBIA · Information Highlights

N. AMERICA
AFRICA
S. AMERICA

Area: 439,512 square miles.
Population: 15,434,090 (July 1964 est.).
Chief Cities (1964 est.): Bogotá, the capital, 1,487,920; Cali, 813,210; Medellín, 776,970; Barranquilla, 521,070.
Government: *President*—Guillermo León Valencia (took office 1962). *Vice President*—Dr. Carlos Lleras Restrepo. *Congress*—House of Representatives, 182 members; party seating (1965)—National Front (Liberal-Conservative coalition), 123; Liberal Revolutionary Movement (MRL), 29; National Popular Alliance, 30. Senate, 86 members; party seating (1965)—National Front, 74; MRL, 12.
Religious Faith: Roman Catholics, 97% of population.
Education: *Literacy rate* (1963)—58% of the population aged 7 and over. *Total school enrollment* (1962)—2,291,579 (primary, 1,948,772; secondary, 174,966; teacher-training, 41,928; technical, 95,497; higher, 30,416).
Finance (1965 est.): *Revenues*, $278,000,000; *expenditures*, $345,000,000; *public debt* (1963), $471,000,000; *monetary unit*, peso (12.82 pesos = U.S.$1, average rate, 1964).
Gross National Product (1963): $3,268,000,000.
National Income (1963): $2,776,000,000; average annual income per person, $184.
Economic Indexes: *Industrial production* (1961), 121 (1958 = 100); *agricultural production* (1964), 121 (1956–57 = 100); *cost of living* (1964), 192 (1958 = 100).
Manufacturing (metric tons, 1963): Cement (1964, 1,965,000; gasoline, 1,287,000; coke, 380,000; sugar, 368,000; crude steel (1964), 195,600; wheat flour (1962), 190,000; natural gas, 101,000.
Crops (metric tons, 1964–65 crop year): Rice, 600,000 (ranks 20th among world producers); coffee, 475,000 (world rank, 2nd); cacao, 16,000 (world rank, 10th); potatoes (1962–63), 871,000; maize, 800,000; cassava (1962–63), 780,000; bananas (1962–63), 508,000; cottonseed, 140,000; sesame (1964–65), 55,000; tobacco (1964–65), 41,900.
Minerals (metric tons, 1964): Gold, 364,991 troy ounces (ranks 9th among world producers); crude petroleum (1963), 60,343,000 barrels (world rank, 17th); bituminous coal (1963), 3,200,000; iron ore, 710,000; salt, 340,000; gypsum, 110,000; silver (1963), 106,278 troy ounces.
Foreign Trade (1964): *Exports*, $548,100,000 (chief exports: coffee, $394,100,000; petroleum, $75,000,000); *imports*, $586,300,000 (chief imports, 1963: electrical machinery, $42,893,000; motor vehicles, $38,746,000; iron and steel, $35,924,000). *Chief trading partners* (1963): U.S. (took 52% of exports, supplied 52% of imports); West Germany (took 12% of exports, supplied 10% of imports); Netherlands (took 7% of exports, supplied 2% of imports).
Transportation: *Roads* (1964), 23,988 miles (3,740 paved); *motor vehicles* (1964), 217,340 (automobiles, 108,588); *railways* (1963), 2,135 miles; *merchant vessels* (1964), 22 (106,000 gross registered tons); *national airline*, Avianca; *principal airports*—Barranquilla, Bogotá, Cali, Medellín.
Communications: *Telephones* (1964): 372,217; *television stations* (1964), 15; *television sets* (1964), 350,000; *radios* (1963), 4,000,000; *newspapers* (1962), 37 (daily circulation, 847,000).

Student Riots. A state of siege, or modified martial law, was imposed by the government on May 21, after rioting by 30,000 students in Medellín, Bogotá, Bucaramanga, and Barranquilla. The demonstrators protested intervention by the United States in the Dominican Republic. President Valencia utilized the stage of siege to carry out economic measures that Congress had refused to approve.

Forthcoming Elections. It was anticipated that the elections for Congress in March 1966 and for the presidency in August would test the Liberal-Conservative National Front coalition's ability to survive. Vice President Carlos Lleras Restrepo of the Official Liberal party withdrew as a candidate in May 1965, but was expected to return to the race.

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COLORADO

One of the worst floods in Colorado's history left a trail of destruction in the South Platte River valley and elsewhere along the east face of the Rocky Mountains in June 1965. The floods, caused by heavy rainstorms that swept the foothill areas of central Colorado, began on June 16. When the water receded a week later, at least 13 persons had been killed and property damage was estimated at about $102 million. In metropolitan Denver, areas on either side of the South Platte were badly damaged, and 15 bridges were swept away. President Lyndon Johnson declared Colorado a major disaster area and made federal emergency aid available.

COLORADO · Information Highlights

Area: 104,247 square miles.
Population: 2,003,000 (1965 est.).
Chief Cities (1965 est.): Denver, the capital (520,000); Pueblo (98,000); Colorado Springs (82,000); Aurora (68,000); Lakewood (51,000); Boulder (50,000); Arvada (37,000); Englewood (35,800).
Government: *Chief Officers*—governor, John A. Love (R); lt. gov., Robert L. Knous (D); secy. of state, Byron Anderson (R); atty. gen., Duke W. Dunbar (R); treas., Homer F. Bedford; comm. of education, Byron W. Hanford; chief justice, Edward E. Pringle. *Legislature*—General Assembly (convened Jan. 13, 1965): Senate, 35 members (20 Republicans, 15 Democrats); House of Representatives, 65 members (23 R, 42 D).
Education: *School enrollment* (1964–65)—public elementary, 314,000 pupils (10,896 teachers); public secondary, 198,000 pupils (9,440 teachers); nonpublic schools, 49,600 pupils (1,650 teachers); college and university (fall 1964), 64,809 students. *Public school expenditures* (1964–65)—$212,000,000 ($470 per pupil); average teacher's salary, $6,025.
Public Finance (fiscal year 1964): *Revenues,* $484,456,000 (including sales tax, $60,724,000; motor fuel tax, $43,939,000; federal funds, $120,793,000). *Expenditures,* $482,051,000 (including $169,337,000 for education; $95,353,000 for health, welfare, and safety; $97,994,000 for highways).
Personal Income (1964): $5,044,000,000; average annual income per person, $2,566.
Public Assistance (fiscal year 1965): $88,257,089 to 77,856 recipients (aged, $60,325,786; dependent children, $18,165,528).
Labor Force (employed persons, July 15, 1965): *Agricultural,* 62,400; *nonagricultural* (wage and salary earners), 701,000 (13% manufacturing, 20% trade, 20% government). *Unemployed persons* (July 15, 1965)—20,900.
Manufacturing (1963): Value added by manufacture, $1,202,958,000 (food and food products, $255,895,000; nonelectrical machinery, $66,978,000; fabricated metals, $47,096,000; electrical machinery, $43,068,000; primary metals, $7,046,000).
Agriculture (1964): *Cash farm income,* $711,492,000 (livestock, $462,915,000; crops, $190,730,000; govt. payments, $57,847,000). *Chief crops* (tons)—hay, 2,794,000 (ranks 17th among the states); sugar beets, 2,793,000 (rank, 3rd); alfalfa, 1,877,000 (rank, 16th); wheat, 829,920 (rank, 16th); potatoes, 472,900 (rank, 9th); barley, 256,944 (rank, 10th); apples, 40,800 (rank, 16th).
Mining (1964): *Production value,* $316,011,000. *Chief minerals* (tons)—coal, 4,355,000 (ranks 11th among the states); uranium, 833,282 (rank, 3rd); zinc, 53,682 (rank, 4th); crude petroleum, 34,755,000 barrels (rank, 10th); silver, 2,626,000 troy ounces (rank, 5th); gold, 42,122 troy ounces (rank, 8th).
Transportation: *Roads* (1965), 79,814 miles (16,302 surfaced); *motor vehicles* (June 1965), 1,136,698; *railroads* (1963), 3,788 miles; *civil aircraft* (1964), 2,043 (163 airports).
Communications (1965): *Telephones,* 971,900; *television stations,* 13; *radio stations,* 83; *newspapers,* 26 (daily circulation, 855,077 in 1964).

Tourism. The summer tourist business suffered a brief setback after the June floods but soon recovered. Rocky Mountain National Park, in its 50th year, had almost 2 million visitors.

The booming ski industry reported that skiers spent $65 million in Colorado during the 1964–65 season. The 1965–66 season, bolstered by increased advertising and by expanding resorts, was expected to break all records.

Legislation. The General Assembly held its second-longest session in Colorado's history from January 6 to May 13. Despite political rivalry between the Democratic-controlled House and the Republican-controlled Senate, much legislation was passed. Highlighting the legislative session was the enactment of a fair-housing bill and a bill that affords state support for birth control education. A new apportionment law providing for the same distribution of seats in the General Assembly as now exists was also passed by both houses. A strong anti-billboard law was blocked, but a compromise version that had the approval of the outdoor-advertising industry was later adopted.

The legislature also made it a felony to evade food and lodging bills of over $50; tightened the law regarding assaults on children; and allowed judges to set penalties in cases of first degree murder where a guilty plea is entered. Other bills made the office of state auditor appointive, and regulated the use of underground water.

Fiscal Measures. The legislature approved budget appropriations of $250 million for the 1966 fiscal year—a rise of $28.3 million over the 1965 budget. Of the total 1966 budget, $188 million came from the general fund. The budget included $71.1 million for primary and secondary education, $3.5 million for junior colleges, and $64.8 million for regular colleges and universities.

To raise additional revenues, the legislature increased the state sales tax from 2 to 3%, but allowed each resident a $7 annual tax refund to compensate for taxes paid on food. The 3% sales tax was extended to beer, wine, and liquor, and the cigarette tax was raised from 3 to 5 cents a pack.

Highways. Colorado learned in 1965 that it would receive $50,896,943 in federal funds under the U.S. Department of Commerce's expanded highway program. Of the total, about $35,600,000 will be used for the construction of interstate highways.

Flood-damaged highways and bridges received legislative attention at a special session called by Governor Love in July. The legislature passed a special tax of 1 cent, to be added for 13 months to the regular motor fuel tax of 6 cents per gallon. The additional tax is expected to bring in about $8,300,000, which will be matched by federal funds.

Nuclear Power Station Planned. The Public Service Company of Colorado announced plans to build a $45 million nuclear power station that will supply 330,000 kilowatts of electricity. Several sites were under consideration for the plant, which is expected to be completed by 1971.

Pearl Anoe
Colorado Feature & Literary Service

COMMERCE. See Economic Review; International Trade; Retail Store Sales; Wholesale Selling.

COMMON MARKET, European. See Europe.

COMMONWEALTH OF NATIONS

UPI

BRITISH SOLDIER on roof guards main street in Aden, on October 6, after rioting by persons seeking elimination of British power in the Arabian Peninsula state.

COMMONWEALTH OF NATIONS

Two countries, Gambia and Singapore, became independent members of the Commonwealth of Nations in 1965, but Rhodesia's unilateral declaration of independence left the former African colony politically and economically isolated from the Commonwealth.

Gambia won its independence on February 18. Singapore seceded from Malaysia on August 9, and was admitted to the Commonwealth as its 22nd sovereign member. (See GAMBIA; SINGAPORE.)

The Commonwealth of Nations is a voluntary association of sovereign states and their dependencies, linked by a common recognition of Queen Elizabeth II of Great Britain as its head and the symbol of the Commonwealth association. For a list of the Commonwealth members, see the accompanying table.

Commonwealth Relations. The Commonwealth heads of government met in London on June 17–25, 1965. A Commonwealth Secretariat and a Commonwealth Foundation to promote interchanges between Commonwealth organizations in professional fields were established. Arnold Smith, a Canadian, was named secretary-general of the Secretariat. The conferees discussed the situation in Rhodesia (see below) and the war in Vietnam. They agreed to form a four-man peace mission that would seek to open the door to negotiations on Vietnam, but the mission failed when the leaders of the Soviet Union, Communist China, and North Vietnam refused to meet with the group.

Delegates to the Commonwealth conference welcomed the establishment of the British Ministry of Overseas Development, as well as the British decision to provide interest-free loans where appropriate.

Delegates from the Commonwealth countries, plus Ireland and South Africa, attended a Commonwealth Standards Conference in London in July. They discussed the implications of Britain's impending changeover to the metric system. The Commonwealth Economic Consultative Council met at Kingston, Jamaica, on September 22 and 23. Delegates discussed the growth rate of developing countries and their difficulties in obtaining development finance, and the possibilities of establishing stable and acceptable price levels for commodities important in Commonwealth trade. The first Commonwealth medical conference was held in Edinburgh in October.

In recent years, the influx of immigrants, particularly Negroes, from Commonwealth countries has caused some friction in Britain. Therefore, measures taken by Britain to control immigration and to ensure the integration of immigrants into the community were of considerable interest to the Commonwealth as a whole.

In the spring of 1965, Earl Mountbatten of Burma headed a fact-finding mission to eight Commonwealth countries. Lord Mountbatten made his report to the British government in June, and on August 2 the government issued a white paper on immigration. Under the new policy, Commonwealth immigration into Britain will be limited to 8,500 persons a year. A new National Committee for Commonwealth Immigrants was established to make grants

KEYSTONE

HEADS OF GOVERNMENT at the Commonwealth conference in London on June 17 include (l. to r., foreground) Sir Albert Margai of Sierre Leone, Kwame Nkrumah of Ghana, Dr. Hastings Banda of Malawi, and Sir Abubakar Tafawa Balewa of Nigeria.

toward the salaries of full-time paid officials employed by local voluntary liaison committees helping immigrants adjust to their new environment. Prospective immigrants are now obliged to produce health certificates and to undergo health examinations at the port of entry. The government pledged a "determined attack on the housing shortage." On August 5, Parliament passed a Race Relations Act aimed at ending discrimination in public accommodations.

Rhodesia. Relations between Britain and Rhodesia became increasingly difficult during 1965 as the Rhodesian government, under Prime Minister Ian Smith, pursued a defiant policy that culminated in a unilateral declaration of independence on November 11.

The British government, under Prime Minister Harold Wilson, had refused to agree to Rhodesian independence on the basis of the existing constitution, which left political power in the hands of a white minority of 223,000 in a population of more than four million. Arthur Bottomley, secretary of state for Commonwealth relations, and Lord Gardiner, lord chancellor, visited Rhodesia from February 21 to March 3, 1965. They discussed the independence question with the Rhodesian government and with other representatives of Rhodesian opinion, including African nationalists, tribal chiefs, and white businessmen and farmers. Bottomley told the British Parliament on March 8 that progress seemed possible on the basis of discussions between the two prime ministers.

A white paper, issued by the Rhodesian government on April 26, questioned the efficacy of any economic sanctions that Great Britain or other countries might attempt to impose after a unilateral declaration of independence. But the white paper was criticized in Rhodesian economic circles and by Prime Minister Wilson, who warned in Commons, on April 29, that a "rebellion" would result in economic hardship for Rhodesia. Seeking a fresh mandate from his countrymen, Smith called a general election for May 7. His party, the Rhodesian Front, won 50 of the 65 seats in the Legislative Assembly.

A communiqué, issued at the conference of Commonwealth prime ministers in London in June, called for a conference between the British prime minister and all political leaders of Rhodesia "to seek agreement on the steps by which Rhodesia might proceed to independence within the Commonwealth at the earliest practicable date on a basis of majority rule."

Further talks took place in Rhodesia in July between the Rhodesian government and Cledwyn Hughes, British minister of state for Commonwealth relations, but neither side modified its position. Smith and D.W. Lardner-Burke, Rhodesian minister of law and order, met with Wilson and Bottomley in London in October. After the talks broke down, Wilson proposed that senior Commonwealth prime ministers visit Rhodesia to ascertain whether a peaceful solution could be found. This was rejected by Smith on October 18.

Wilson and Bottomley flew to Rhodesia on October 24 in a final effort to postpone independence. Wilson conferred with representatives of the Rhodesian government, and with spokesmen for all sections of Rhodesian opinion, including African nationalist leaders. He and Smith agreed on the appointment of a royal commission to determine whether the people of Rhodesia wanted independence under the present constitution. But after Wilson returned to London on October 30, events in Rhodesia moved swiftly toward a showdown. The Rhodesian government proclaimed a three-month state of national emergency on November 5. On the next day, Smith charged that Wilson had hedged his acceptance of the royal commission to the extent that the idea had been scuttled. On November 10, Rhodesia pledged its "constant loyalty" to the British crown, no matter "whatever happens." The next day, Smith, on behalf of his government, declared Rhodesia independent.

PIX

RHODESIA declared independence unilaterally on November 11, two weeks after fruitless talks between Prime Ministers Ian Smith of Rhodesia and Harold Wilson of Britain.

Britain condemned the action, imposed economic sanctions, and airlifted oil to Rhodesia's landlocked neighbor, Zambia. But Prime Minister Wilson refused Zambia's request to send troops to protect the Kariba Dam, on the Rhodesian border, which supplies power for Zambia's copper industry. Angered at Britain's failure to subdue the Rhodesian regime, nine African nations, including Commonwealth members Ghana and Tanzania, cut diplomatic ties with Britain in December. (See also RHODESIA; UNITED NATIONS.)

Other Territories. In the African dependent territories, other than Rhodesia, progress toward independence was smooth. On March 1, Bechuanaland chose a Legislative Assembly under a new constitution providing for a ministerial form of government based on universal adult suffrage. The Bechuanaland Democratic Party (BDP) won 28 of the 31 seats in the assembly, and its leader, Seretse Khama, became the country's first prime minister. The BDP advocates a multiracial society. Khama told the assembly on December 13 that Bechuanaland would join the Commonwealth when it became independent as the Republic of Botswana on Sept. 30, 1966.

An election in Basutoland on April 29 resulted in victory for the Basutoland National Party, which won 31 of 60 seats in the National Assembly, and then formed a government under a "pre-independence" constitution that came into force on May 1. On July 7, Chief Leabua Jonathan was sworn in as prime minister. In the Swaziland legislature the announcement of constitutional review, leading to a new constitution, was made on August 19.

Participants in a Fiji constitutional conference, held in London from July 26 to August 9, recommended that Fiji should have an elected majority in the legislative council; that full adult suffrage, including the enfranchisement of minority groups, should be instituted; and that a ministerial system should be set up. However, the Indian community in Fiji objected to a number of the detailed proposals toward these ends.

In South Arabia, progress toward independence, in accordance with a 1963 resolution by the United Nations General Assembly, was held up by local disagreements and trouble within Aden. (See Arabia.)

As a result of a constitutional conference in London, September 7–24, Mauritius will become independent before the end of 1966, after a six-month preliminary period of full internal self-government. British Guiana will become independent on May 26, 1966, and will adopt its old name, Guyana. Racial turmoil subsided in 1965 under the leadership of Premier Forbes Burnham. (See British Guiana.)

On April 5, the British government published a white paper rejecting recently asserted Spanish claims to Gibraltar. Frontier restrictions imposed by Spain in 1964 continued to impair Gibraltar's economy. Gibraltar's prime minister, Sir Jushua Hassan, was informed in London on July 21 that Britain would make grants of £1,100,000 and loans of £200,000 available over a three-year period.

On December 30, the Colonial Office proposed a new constitutional status, "states in association with Britain," for six Caribbean islands and island groups —Antigua, St. Kitts-Nevis-Anguilla, Dominica, St. Lucia, St. Vincent, and Grenada. The islands would be internally self-governing, but Britain would handle their foreign affairs and defense.

Recommendations for an overhaul of the constitution of the British Virgin Islands and the establishment of a partial ministerial system were contained in the report published August 12 by the constitutional commissioner, Dr. Mary Proudfoot.

In elections in British Honduras on March 1, the People's United Party, which advocates independence within the next few years, won 16 of 18 seats in the legislature. (See British Honduras.)

Aid to the Territories. Aid from Britain to the Commonwealth in 1964–65 was estimated at £127.1 million. Aid to the dependencies under the colonial welfare and development program from 1946 to March 31, 1965, totaled £295,992,303, of which £14,748,339 was disbursed in 1964–65. On Jan. 1, 1965, the Commonwealth Development Corporation was operating 121 projects at a total commitment of £125 million; new investment during 1964 totaled £12.1 million. Between 1953 and March 31, 1965, the Commonwealth Development Finance Corporation invested £30.8 million overseas, of which £2.2 million was put into 16 new projects in 10 countries in 1964–65. ..

Commonwealth External Trade. Exports from Commonwealth members totaled £11,746 million in 1964, an increase of 9% over 1963. Imports, at £13,362 million, rose 12%. In the first quarter of 1965, exports at £2,936 million were slightly lower than in the last quarter of 1964, but imports at £3,451 million showed a gain of £207 million.

Colombo Plan. The 15 members of the Colombo Plan for Cooperative Development in South and Southeast Asia received $14,864 million from outside the area between 1950 and March 31, 1964. Of this, $2,165 million was provided in 1963–1964.

RICHARD E. WEBB
Director, Reference and Library Division
British Information Services, New York

COMMONWEALTH OF NATIONS

Component	Area (sq. mi.)	Pop. (mid-1964)	Status
Europe			
Great Britain & islands of British seas[1]	94,522	54,226,000	Sovereign state
Gibraltar	2	24,000	Colony
Malta	122	324,000	Sovereign state
Total in Europe	94,646	54,574,000	
Africa			
British South African territories:			
Basutoland	11,716	729,000	Colony
Bechuanaland protectorate	222,000	548,000	Protectorate
Swaziland	6,704	285,000	Protectorate
Gambia	4,003	324,000	Sovereign state
Ghana	91,843	7,600,000	Sovereign state
Kenya	224,960	9,104,000	Sovereign state
Malawi	46,066	3,900,000	Sovereign state
Mauritius	809	742,000	Colony
Nigeria	356,668	56,400,000	Sovereign state
Rhodesia[2]	150,333	4,140,000	Internally self-governing colony
St. Helena	47	5,000	Colony
Ascension	34	478[3]	
Tristan da Cunha	81	198[3]	
Seychelles	156	46,000	Colony
Sierra Leone	27,925	2,200,000	Sovereign state
Tanzania	362,820	10,325,000	Sovereign state
Uganda	92,525	7,270,000	Sovereign state
Zambia	288,129	3,600,000	Sovereign state
Total in Africa	1,886,819	107,218,676	
America			
Antigua	171	58,000	Colony
Bahamas	4,400	133,000	Internally self-governing colony
Barbados	166	242,000	Colony
Bermuda	20	48,000	Colony
British Guiana	83,000	628,000	Internally self-governing colony
British Honduras	8,867	103,000	Internally self-governing colony
British Virgin Islands	59	8,000	Colony
Canada	3,851,802	19,237,000	Sovereign state
Cayman Islands	100	9,000	Colony
Dominica	305	65,000	Colony
Falkland Islands[4]	4,618	2,000	Colony
Grenada	133	93,000	Colony
Jamaica	4,232	1,728,000	Sovereign state
Montserrat	32	13,000	Colony
St. Kitts-Nevis-Anguilla	153	62,000	Colony
St. Lucia	238	92,000	Colony
St. Vincent	150	86,000	Colony
Trinidad and Tobago	1,980	950,000	Sovereign state
Turks and Caicos	166	6,000	Colony
Total in America	3,960,592	23,563,000	
Asia			
Aden	75	230,000	Protectorate state
Bahrain[5]	231	175,000	Protectorate state
Brunei	2,226	97,000	Protectorate state
Ceylon	25,332	10,965,000	Sovereign state
Cyprus	3,572	587,000	Sovereign state
Hong Kong	398	3,692,000	Colony
India	1,176,150	471,000,000	Sovereign state
Jammu and Kashmir	86,023	3,729,000[6]	In dispute
Malaysia	128,430	9,137,000	Sovereign state
Pakistan	365,528	100,762,000	Sovereign state
Qatar[5]	4,000	60,000	Protected state
Sikkim	2,744	172,000	Protected state
Singapore	224	1,820,000	Sovereign state
South Arabia	111,000	868,000	Protected federation
Trucial States[5]	32,278	111,000	Protected state
Total in Asia	1,938,211	603,405,000	
Oceania			
Australia	2,971,021	11,136,000	Sovereign state
Christmas Island	62	3,000	External territory
Cocos Islands	5	1,000	External territory
Nauru	8	5,000	Trusteeship
New Guinea, Terr	92,996	1,539,000	Trusteeship
Norfolk Island	14	1,000	External territory
Papua	90,540	562,000	External territory
Fiji	7,055	449,000	Colony
New Hebrides	5,700	66,000	Condominium
New Zealand	103,736	2,594,000	Sovereign state
Pitcairn Island	2	86	Colony
Tonga	269	70,000	Protected state
Western Pacific Islands:			
British Solomon Islands	11,500	133,000	Protectorate
Gilbert and Ellice Islands	349	47,000	Colony
Western Samoa[5]	1,097	119,000	Sovereign state
Total in Oceania	3,284,354	16,725,086	
Grand total	11,164,622	805,485,762	

[1] Includes Northern Island, Channel Islands, and Isle of Man. [2] Great Britain did not recognize Rhodesia's independence, declared on Nov. 11, 1965. Rhodesia thus technically retains its Commonwealth status as an internally self-governing colony. [3] Mid-1963 est. [4] Excludes dependencies, part of which became a separate colony, called British Antarctic Territory, on March 3, 1962. [5] Not an integral part of the Commonwealth. [6] 1964 est. of India-held portion only.

COMMUNICATIONS. See Federal Communications Commission; Post Office; Space Exploration; Telephone; Television and Radio.

UPI

COMMUNISM suffered a major setback in 1965 in Indonesia, where an abortive coup by Communists failed on October 1. Here, soldiers interrogate a suspected Communist.

COMMUNISM

COMMUNISM

The fall of Soviet Premier Nikita S. Khrushchev in October 1964 did not stop the disintegration of the world Communist movement. In 1965, Communist China continued to accuse the Soviet Union of betraying the Communist cause. The Chinese Communist press indicted the new Soviet leaders for cooperating with the United States, splitting world Communist unity, incorrectly revising Marxism, establishing a system of "phony" communism, adhering to a fraudulent treaty banning above-ground nuclear tests, and appeasing American aggression in Vietnam. The Chinese Communists also insisted that violent Communist revolution is preferable to peaceful coexistence between Communist and capitalist countries, and that a world war between them is inevitable. China also declared that Stalin was a great leader during a period of immense Soviet difficulties.

Soviet-Chinese Split. During the year, 10 Communist parties, mostly in the Far East, deserted Moscow's leadership in favor of Peking's. These parties were in Albania, Indonesia, Japan, Laos, Malaysia, New Zealand, North Korea, Thailand, and both North and South Vietnam. In addition, new Communist parties loyal to Peking were operating in 18 other nations—Australia, Belgium, Greece, the Netherlands, Portugal, Spain, Switzerland, and Yugoslavia in Europe; Brazil, Colombia, Guatemala, Mexico, Paraguay, and Peru in Latin America; and Burma, Ceylon, Lebanon, and India in Asia. To complicate matters, the Communist parties in Austria, Ecuador, Nepal, and Norway were split between pro-Moscow and pro-Peking groups.

In March, the Soviet Union convened a conference of Communist parties to plan a world Communist congress that would settle the Sino-Soviet dispute. This conference, as originally proposed by the former Soviet premier, Nikita S. Khrushchev, was to have taken place in late 1964 and to have included representatives of 26 countries. Khrushchev's successors, Premier Aleksei N. Kosygin and Communist First Secretary Leonid I. Brezhnev, postponed the meeting until March 1965. They were disappointed when delegates from the Communist parties in Albania, China, Indonesia, Japan, North Korea, North Vietnam, and Rumania refused to attend. Party leaders came only from Australia; from Argentina, Brazil, and Cuba in Latin America; from Britain, Finland, France, Italy, and West Germany in western Europe; from India, Mongolia, and Syria in Asia; and from the Soviet eastern European satellites—Bulgaria, Czechoslovakia, East Germany, Hungary, and Poland. Delegates from the United States attended as observers. To avoid offending China, the conference change its title from "preparatory" to "consultative." The delegates failed to reach a decision on convening a world Communist congress.

Because the delegates of foreign Communist parties to the Moscow conference were unwilling to undertake any joint action against the Chinese Communists, the Soviet Union's position in the Sino-Soviet dispute was weakened. In reply to almost constant attacks by the Chinese Communist press against Soviet leaders and policy, Soviet spokesmen in 1965 merely stressed that the Chinese attitude imperiled world Communist unity. However, the Soviet government's actions were stronger than its words. In March, China was angered when Soviet police and soldiers broke up a Chinese-led riot of Asian students protesting before the U.S. embassy in Moscow against American involvement in Vietnam. Soviet police dispersed a similar demonstration by Vietnamese students in Leningrad in early April.

Communist China timed the explosion of its second nuclear test for May 14, 1965—the 10th anniversary of the conclusion of the Warsaw Pact. The USSR immediately published atomic air raid precautions in the press of Soviet Central Asia.

COMMUNIST STUDENTS attack American embassy in Moscow on March 4 to protest air strikes in North Vietnam.

UPI

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COMMUNIST ARMS CACHE in Caracas is guarded by Venezuelan soldier after seizure by government in November.

Despite militant gestures against each other, both China and the Soviet Union supplied arms to North Vietnam and to pro-Communist rebels fighting the established African government in the Congo (Léopoldville). Soviet weapons captured from the Congolese rebels proved to have been manufactured in 1964 expressly for guerrilla warfare.

The Sino-Soviet dispute created other difficulties. After a coup on June 19 had deposed the pro-Soviet Algerian government, the Soviet Union, despite Chinese objections, postponed the 1965 World Youth Festival until 1966, arguing that the original site in Algeria was no longer suitable. At the World Peace Congress in Helsinki, Finland, in July, both the Albanian and Chinese delegations accused the USSR of cooperating with the United States.

Eastern European Satellites. In 1965, the Communist parties of eastern Europe displayed increasingly independent tendencies. Official Czechoslovak propaganda praised the civil liberties and intellectual freedom of the Czechoslovak bourgeois republic of 1918–39. In March, a Polish Communist leader rejected the Soviet concept of a new Communist International dominated by one Communist country. In July, Rumania changed its designation from "people's republic" to "Soviet republic," and adopted a new constitution eliminating all references to the Soviet liberation of Rumania during World War II.

Even Bulgaria, the most pro-Soviet of all the USSR's European satellites, experienced nationalistic unrest during 1965. In April, five army officers and five prominent civilians led a small military revolt in an unsuccessful attempt to overthrow the Bulgarian government and establish a Communist regime independent of Moscow. The rebels, who included a foreign ministry official and a college dean, were apparently sympathetic to independent Communist Yugoslavia, not Communist China. The leaders were tried and given relatively moderate prison sentences ranging from three to 15 years.

Although the eastern European satellites showed increased independence, Soviet troops remained in three satellite nations; there were two divisions in Poland, four in Hungary, and 20 in East Germany. The USSR continued to refuse to allow its European satellite armies to have long-range rockets, heavy bombers, or nuclear weapons. The armies of the active Warsaw Pact nations—Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Rumania, and the USSR—continued to be commanded by a Soviet assistant minister of defense. These nations held joint military maneuvers in the Carpathian Ukraine in May, and in the Thuringia region of East Germany in November.

Although the Communist bloc countries in 1965 produced about two fifths of world industrial output, Communist industry was inefficient, often producing machines and goods of poor quality. Except in increasingly independent Rumania, rates of industrial growth were slowing down in Russia and eastern Europe, the two main concentrations of Communist industry. Bad weather caused poor harvests in 1965 in both areas, and their governments instituted economic reforms to increase profits in industry and agriculture.

The Council for Economic Mutual Assistance (CEMA), whose active members are Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Rumania, Outer Mongolia, and the USSR, again failed to establish a Communist common market to aid Communist national economies. Soviet appeals for eastern European satellites to concentrate on specialized industries fell on deaf ears. Each satellite government preferred a well-rounded industrial economy that would be self-sufficient should the nation leave the Soviet orbit in the future. Most of the satellites felt that a specialized economy would create dangerous dependence on other CEMA countries for key products.

In 1965 the Soviet Union was troubled by the tendency of its eastern European satellites to increase trade with Western countries. The satellites also welcomed Western tourists who brought in foreign currency. Some of the eastern European nations permitted West German, British, and American firms to build and operate enterprises within their borders. Rumania purchased from West Germany machines that were also available in East Germany, and when East Germany protested, Rumania replied that the West German machinery was better. Meanwhile, eastern Europe, the USSR, and Communist China all continued to buy grain from some Western countries, notably Canada.

Communist economic troubles may be one reason for the apparent lack of faith of eastern Europeans in Marxism. A poll by Radio Free Europe of several thousand eastern Europeans traveling in western Europe revealed that of those interviewed only 14% of the Czechoslovaks, 13% of the Rumanians, 7% of the Hungarians, and a mere 6% of the Poles believed in the Communist system.

Asia. A grave setback for the Communist idea of forcible revolution occurred in Indonesia in late September and early October, when armed Communist civilians and pro-Communist air force units failed in a week-long attempt to seize power. Apparently instigated by Communist China, the revolt was crushed by the Indonesian army, which traditionally has been anti-Communist. Muslim mobs, without interference from the army, looted and burned buildings belonging to the Indonesian Communist party, the Communist youth league, and pro-Communist trade unions. Communist leaders either went into hiding or fled the country. Violence flared again in late October and November when Communist forces in the province of Central Java clashed with Indonesian army troops. An army directive established martial law in Central Java on October 28.

The abortive Communist revolt against Indonesia's

WORLD COMMUNIST STRENGTH, 1965

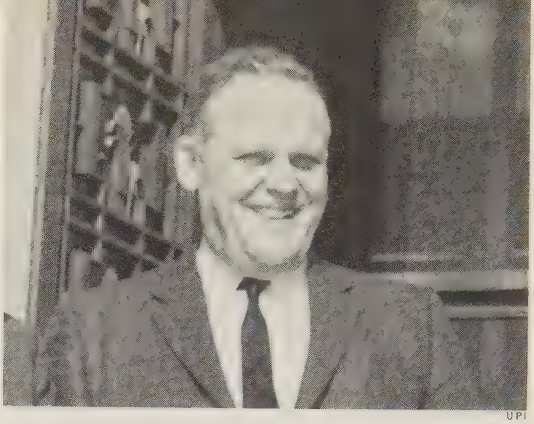
Country	Membership
Africa	
Algeria*	5,500
Morocco*	1,250
South Africa*	800
Sudan	2,500
Tunisia*	1,000
United Arab Republic*	1,000
Asia	
Australia	5,000
Burma*	5,000
Cambodia	100
Ceylon	1,900
China, Communist	18,000,000
India	135,000
Indonesia	3,000,000
Iran*	1,500
Iraq*	15,000
Israel	2,000
Japan	120,000
Jordan*	500
Korea, North	1,300,000
Laos	100
Lebanon*	3,000
Malaysia*	2,000
Mongolian People's Republic	46,000
Nepal*	3,500
New Zealand	500
Pakistan*	3,000
Philippines*	1,200
Syria*	4,000
Turkey*	1,000
Vietnam, North	570,000
Vietnam, South*	31,000
Europe	
Albania	53,000
Austria	35,000
Belgium	11,000
Bulgaria	528,700
Cyprus	10,000
Czechoslovakia	1,676,500
Denmark	5,000
Finland	40,000
France	260,000
Germany, East	1,610,700
Germany, West*	50,000
Great Britain	34,400
Greece*	20,000
Hungary	520,000
Iceland	1,000
Ireland	100
Italy	1,526,000
Luxembourg	500
Netherlands	12,000
Norway	4,500
Poland	1,614,200
Portugal*	2,000
Rumania	1,450,000
Spain*	5,000
Sweden	20,000
Switzerland	6,000
Yugoslavia	1,030,000
North America	
Canada	3,500
Costa Rica*	300
Cuba	35,000
El Salvador*	200
Guadeloupe	1,000
Guatemala*	1,300
Honduras*	2,400
Martinique	700
Mexico	50,000
Nicaragua*	250
Panama*	400
United States	10,000
South America	
Argentina	65,000
Bolivia	4,500
Brazil*	31,000
Chile	27,500
Colombia	13,000
Ecuador*	2,500
Paraguay*	5,000
Peru*	8,500
Uruguay	10,000
Venezuela*	30,000
USSR	
USSR	12,000,000

* Countries where the Communist party is illegal. Source: U.S. Department of State, *World Strength of the Communist Party Organizations* (Washington 1965).

President Sukarno, Chinese border attacks upon India during and after the undeclared three-week Indian-Pakistani war, and Peking's refusal to mediate the Vietnamese war, all frightened many Asian and African governments which Red China had been wooing. In the fall of 1965, few official representatives from underdeveloped nations of the free world attended ceremonies in Peking honoring the founding of Communist China.

Latin America. A great change occurred in the revolutionary tactics of Latin-American Communists at the beginning of 1965. For decades Communists had tried to gain power by infiltrating national governments, or groups like national armies and trade unions that might have or might get political power. Recently both Communist China and Cuba have opposed such infiltration "from the top," and have started to organize Communist guerrilla bands among the impoverished Latin American peasantry. Fearful of alienating Cuba's Premier Fidel Castro, and jealous of Chinese Communist influence, the USSR convened a meeting of Latin American Communist leaders in Havana at the close of 1964. They were instructed to render all-out support to Communist guerrillas already fighting the legal governments in six nations—Colombia, Guatemala, Haiti, Honduras, Paraguay, and Venezuela. Latin American Communist leaders were also ordered to put pressure on their governments to resume diplomatic relations with Cuba, to end the economic blockade of Cuba, and not to take unfriendly actions against Cuban Premier Castro.

Meanwhile, there were indications that all was not well in Communist Cuba during 1965. In May, Ernesto ("Ché") Guevara, the former chief of Cuba's economic planning, disappeared from Cuban political life. His disappearance came after an official trip to Africa, Egypt, and Communist China, during which he antagonized the Soviet Union by stating that prosperous Communist nations should supply free material aid to underdeveloped Communist countries. It appeared that Guevara might have been purged from Cuban power at Moscow's insistence. Castro asserted that Guevara left Cuba to participate in a revolutionary struggle elsewhere in Latin America.


UPI

U.S. COMMUNIST LEADER Gus Hall (*above*) hails U.S. Supreme Court decision of November 15 that Communist party members may refuse to register as agents of foreign power.

Shortages of food and housing evidently induced Castro to allow any Cuban who so desired to emigrate to the United States. This offer was accepted by the U.S. government, and the exodus of thousands of Cuban refugees began in October. Cuba thus became the first Communist country to permit large-scale emigration.

North America. The Communist party of the United States, with a membership of only 10,000, officially supported the USSR in the Sino-Soviet dispute, but publicly criticized the Soviet Union for anti-Semitism. During 1965 the party and its sympathizers were active in student meetings opposing U.S. intervention in the Vietnamese war.

On February 24, the U.S. Department of Justice secured the indictment of the Communist party by the U.S. district court in Washington, D.C., for failing to register with the department as required by the Internal Security Act. A separate indictment requested that the party list its members and financial activities. The U.S. Supreme Court ruled on November 15 that individual members of the Communist party may refuse to register with the U.S. Department of Justice. Forcing them to register as agents of a foreign power, the court declared, infringed on their constitutional guarantees against self-incrimination.

On October 6 the U.S. tax court in Washington, D.C., ruled that the Communist party is not a charitable or fraternal organization, and that it is therefore not tax exempt and must pay $326,313 in federal income taxes and penalties for the year 1951. The party refused to pay and appealed the verdict to a higher court.

In January the Canadian Communist party elected William Kashtan as general secretary to replace Leslie Morris, who died on Nov. 13, 1964. The party supported the USSR in the Sino-Soviet dispute, but a tiny splinter group called the Progressive Workers Movement accepted the leadership of China.

Ellsworth Raymond
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Associate Professor of Comparative Government
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CONGO, Democratic Republic of

As head of the transitional government of Congo (Léopoldville) set up in July 1964, Premier Moïse Tshombe had the responsibility of getting the country to operate under a new constitution. He also had to suppress the rebellion in the northeast, hold parliamentary elections, improve the economy, and make his government acceptable to other African states. He succeeded in these labors in 1965, but was denied the fruits of victory. In October he was dismissed by President Joseph Kasavubu, whose government was overthrown in a military coup led by Maj. Gen. Joseph Mobutu in November 1965.

Rebellion. Congolese rebels continued their struggle against the government even after the rebel capital of Stanleyville fell to government troops in November 1964. Despite the receipt of modern arms from Algeria and Egypt, along with Soviet aid, the rebels were defeated, but not before they had massacred hundreds of European hostages and trained Africans. Attacks on the rebels were spearheaded by white mercenaries recruited in Rhodesia, South Africa, and Europe. Efforts by the Organization of African Unity to effect a reconciliation between the rebels and the government failed.

In March 1965 the rebels lost control of their supply routes from the Sudan and Uganda. On April 29, Tshombe announced that the rebellion was over. Their leaders fled the country and went to Cairo, where they created a 20-member Supreme Council of the Revolution to replace the defeated Stanleyville government. Christophe Gbenye became prime minister and Gaston Soumialot president of the government-in-exile. Cooperation between the leaders was impossible, and the reorganized government was unable to operate effectively.

Tshombe's formal proclamation of victory did not mark the absolute end of the rebellion, however, and armed rebels still roamed the countryside in northeastern Congo late in 1965. If the country's economy and administration are to be maintained on a stable basis, these rebels must be subdued. To help achieve this aim, the government authorized European heads of plantations and mining companies to arm themselves against depredations by rebellious elements.

Economy. The country, particularly the northeastern section, suffered much from the rebellion, which interfered with production and transportation. However, copper production increased, as did the profits of the Union Minière du Haut Katanga, the country's most important industrial federation. Congo's total exports also rose.

Tshombe's most notable economic achievement was a settlement with Belgium in February that arranged transfer to Congo of $300,000,000 in securities held by the former Belgian colonial administration.

Elections. Under the 1964 constitution, a National Assembly election was scheduled for February 1965, but was postponed until March 18–April 30. Preparations for the election stirred considerable political activity, and in early February, Tshombe organized 49 of the country's 243 political parties into a loose grouping called the Congolese National Convention (CONACO). The elections gave CONACO a safe majority in both chambers of the National Assembly. However, because of reported irregularities, a special court ordered new elections in three districts where CONACO won 20 of 32 seats.

On the grave questions of whether he would resign and who would be the next president, Tshombe differed with President Joseph Kasavubu. It was Tshombe's view that his government could function until the election of a new president six months after the dissolution of the old parliament, or early in 1966. Tshombe believed that he needed only to enlarge his cabinet by relinquishing most of the nine ministries he himself held.

Although Tshombe made no formal declaration, it was generally believed that he would seek the presidency, an office that held vast political power under the new constitution. Since Kasavubu aspired to retain the presidential office, a serious but unacknowledged rivalry developed between the two men. Kasavubu, who had not been enthusiastic about Tshombe when he made him premier in 1964, was most reluctant to see him in control of the new government and gaining popularity at home and abroad. Kasavubu took the position that Tshombe's mandate would lapse when the results of the elections became known, presumably by June 30.

Finally, Kasavubu decided to act. On July 6 he dismissed Godefroid Munongo, Tshombe's minister of the interior. Instead of letting Tshombe add a tenth portfolio to the nine he already held, Kasavubu appointed Victor Nendaka, former head of the security police, to take over the Interior ministry. The president convoked the National Assembly in an extraordinary session on September 13, although, with election returns not in from all disputed districts, only 155 of the full complement of 166 deputies were present. Tshombe's CONACO supporters

DEMOCRATIC REPUBLIC OF CONGO · Information Highlights

ASIA
S. AMERICA

Area: 905,562 square miles.
Population: 15,627,000 (July 1, 1965, est.).
Chief Cities (1964 est.): Léopoldville, the capital, 1,000,000; Elisabethville, 200,000; Stanleyville, 100,000.
Government: *President*—Gen. Joseph D. Mobutu (assumed office Nov. 25, 1965); *Premier*—Leonard Mulamba (appointed Nov. 28, 1965). *Parliament*—National Assembly (Chamber of Deputies, 166 members; Senate, 132 members).
Religious Faiths: Tribal religions, 50% of population; Roman Catholics, 31%; others, 19%.
Education: *Literacy rate* (1955)—15% of population aged 15 and over. *Total school enrollment* (1962–63)—1,834,614 (primary, 1,762,000; secondary, 71,000; higher, 1,614).
Finance (1964 est.): *Revenues,* $208,000,000; *expenditures,* $227,000,000; *monetary unit,* franc (180 francs equal U.S.$1.)
National Income (1959): $268,000,000; average annual income per person, $19.
Economic Indexes: *Industrial production* (1959), 99 (1958=100); *cost of living* (1964), 368 (1961=100).
Crops (metric tons): Palm kernels (1963–64), 101,600 (ranks 3rd among world producers); coffee (1964–65), 48,000 (rank, 16th); tea (1964), 4,500 (rank, 17th).
Minerals (metric tons, 1964): Manganese ore, 309,348 (ranks 9th among world producers); copper, 277,641 (rank, 6th); zinc, 105,540 (rank, 10th); tin, 7,811 (rank, 8th); gem diamonds, 295,000 carats (rank, 7th).
Foreign Trade (1963): *Exports,* $132,000,000 (chief export: copper, $56,100,000); *imports,* $110,000,000. *Chief trading partners:* Belgium-Luxembourg (took 20% of exports, supplied 28% of imports); U.S. (took 4% of exports, supplied 31% of imports).
Transportation: *Roads* (1964), 90,430 miles (930 paved); *motor vehicles* (1964), 53,000; *railways* (1958), 3,215 miles; *airline,* Air Congo; *principal airport,* Léopoldville.
Communications: *Telephones* (1964): 30,000; *radios* (1959), 35,000; *newspapers* (1962), 7 (daily circulation, 28,000).

elected their candidate president of the Chamber of Deputies, but had no similar success in the Senate.

In late September and early October, Nendaka formed a political party known as the Congolese Democratic Front to oppose Tshombe's CONACO.

Addressing the joint session of both chambers of the National Assembly on October 13, Kasavubu surprised everybody by dismissing Tshombe and naming Évariste Kimba as his successor. Kimba had served Tshombe as foreign minister in his secessionist government, but had opposed him in the recent elections. The move might be regarded as an attempt to check Tshombe's plans to reunify Katanga Province, which had seceded from the Congo in 1960. Violence broke out in Léopoldville, where mysterious attacks were made on Tshombe's supporters. Demonstrators at the Belgian embassy in Léopoldville charged that Belgian troops were supporting Tshombe.

Army Coup. On November 25, Maj. Gen. Joseph Mobutu, commander of the Congolese army, staged a quiet and bloodless coup to end the growing violence. He took over the office of president himself, cancelled the presidential elections scheduled for the spring of 1966, and announced that he would hold the office for the next five years. He named Col. Leonard Mulamba as premier, to head a government of "national union." Tshombe was not included in the new government. On December 1, Mobutu announced that he would rule the country by decree, although Parliament was given the formal right to veto his decrees. (See also AFRICA.)

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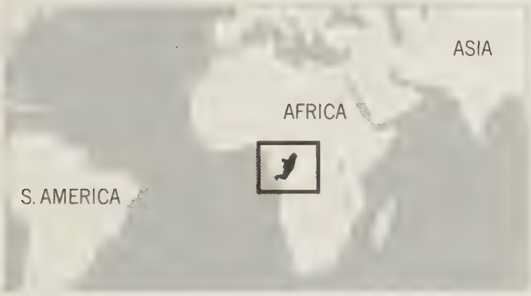
Department of History
Yale University

CONGO, Republic of the



The government of the Congo (Brazzaville) consolidated its power in 1965 and became more radical in dealing with dissident elements within the country. In foreign affairs, Brazzaville's relations with neighboring Congo (Léopoldville) continued to be strained.

Party Purge. The purge of moderate labor leaders of the Confédération Africaine des Travailleurs Croyants from the ranks of the country's sole political party, the National Revolutionary Movement, was completed in 1965. All workers were organized into a single organization, the Confédération Syndicale Congolaise.

Officials Slain. Three Brazzaville government officials were murdered in February, after Premier Pascal Lissouba warned of a plot against the government involving the "financial backers of Moïse Tshombe," then premier of Congo (Léopoldville). Lissouba's warnings about the plot gained some credence when former President Fulbert Youlou, who had been overthrown in August 1963, fled Brazzaville and was granted asylum in Léopoldville. In June a people's tribunal in Brazzaville sentenced Youlou to death *in absentia*. From Léopoldville, Youlou continued to press for the overthrow of the Brazzaville government.

—REPUBLIC OF THE CONGO · Information Highlights—

Area: 132,046 square miles.
Population: 826,000 (July 1, 1964, est.).
Chief City (1962 est.): Brazzaville, the capital, 135,368.
Government: *President*—Alphonse Massamba-Débat (took office Dec. 19, 1963); *Premier*, Pascal Lissouba (took office Dec. 24, 1963). *Parliament*—National Assembly, 55 members, all belonging to the National Revolutionary Movement.
Religious Faiths: Tribal religions, 46% of population; Roman Catholics, 32%; Protestants, 16%; Muslims, 0.5%; others, 5.5%.
Education: *Literacy rate* (1961)—20% of population. *Total school enrollment* (1963)—168,545 (primary, 156,620; secondary, 9,265; teacher-training, 358; technical, 2,302; higher (1962), 547).
Finance (1964): *Revenues*, $39,100,000; *expenditures*, $39,100,000; *monetary unit*, CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1962 est.): $37,000,000.
Manufacturing: Sugar (1963), 26,000 metric tons; beer (1963), 2,940; lumber (1962), 33,000 cubic meters.
Crops (metric tons): Cassava (1962–63), 850,000 (ranks 9th among world producers); rubber (1963), 37,600 (world rank, 9th); peanuts (1962–63), 10,000; cocoa beans (1964–65), 900.
Minerals (metric tons, 1964): Gem diamonds, 316,000 carats (ranks 5th among world producers); zinc, 5,060; lead, 2,177; copper (1963), 290; crude petroleum, 619,000 barrels; gold, 3,567 troy ounces.
Foreign Trade (1964): *Exports*, $47,400,000 (chief exports: diamonds, $19,700,000; wood, $19,300,000); *imports*, $72,500,000 (chief imports, 1963: alcoholic beverages, $3,100,000; woven cotton fabrics, $3,000,000; trucks, $2,200,000). *Chief trading partners* (1963): France (took 15% of exports, supplied 61% of imports); Belgium-Luxembourg (took 29% of exports, supplied 2% of imports); West Germany (took 17% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 6,737 miles (147 paved); *motor vehicles* (1964), 14,200 (automobiles, 7,400); *railways* (1963), 321 miles; *principal airport*, Brazzaville.
Communications: *Telephones* (1964): 7,186; *television sets* (1963), 100; *newspapers* (1959), 3 (daily circulation, 1,100).

Foreign Affairs. The most important consideration in Brazzaville's foreign policy during 1965 was the hostility between Brazzaville and Léopoldville. Throughout most of the year each government accused the other of aiding attempts to subvert it.

Brazzaville's relations with the United States were strained in 1965. The major point of friction seemed to be the U.S. backing of the Tshombe government in Léopoldville. On August 13 the United States withdrew diplomatic and consular representation in Brazzaville after protesting their alleged mistreatment by the Congolese government.

In 1965 the Congo continued to maintain friendly relations with France, which is the country's chief supplier of goods and aid.

Communist China increased its influence in Brazzaville in 1965, but the government of President Massamba-Débat also maintained friendly relations with the Soviet Union and France.

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Associate Research Professor of Government
Boston University

CONGRESS

The United States Congress consists of the Senate (100 members) and the House of Representatives (435 members). Senators are elected for six-year terms; with each third elected at two-year intervals. Representatives serve two-year terms.

The first session of the 89th Congress (Jan. 4–Oct. 23, 1965) had 68 Democratic and 32 Republican Senators and 295 Democratic and 140 Republican Representatives. The second session opened on Jan. 10, 1966. A list of members appears on pages 208–209. (For 1965 congressional actions see UNITED STATES.)

EIGHTY-NINTH CONGRESS OF THE UNITED STATES

(Membership as of Jan. 10, 1966)

SENATE

(Democrats, 68; Republicans, 32; total, 100)

President: Vice-President Hubert H. Humphrey, Minn.
Secretary: Emery L. Frazier

Majority Leader: Mike Mansfield, Mont.
Minority Leader: Everett McKinley Dirksen, Ill.

Letters after senators' names refer to party affiliation—D for Democrat, R for Republican. Single asterisk (*) denotes term expiring in January, 1967; double asterisk (**), term expiring in January, 1969; triple asterisk (***), term expiring in January, 1971.

Alabama
**Lister Hill, D
*John J. Sparkman, D

Alaska
*E. L. Bartlett, D
**Ernest Gruening, D

Arizona
**Carl Hayden, D
***Paul J. Fannin, R

Arkansas
*John L. McClellan, D
**J. W. Fulbright, D

California
**Thomas H. Kuchel, R
***George Murphy, R

Colorado
*Gordon Allott, R
**Peter H. Dominick, R

Connecticut
***Thomas J. Dodd, D
**Abraham A. Ribicoff, D

Delaware
***John J. Williams, R
*J. Caleb Boggs, R

Florida
***Spessard L. Holland, D
**George A. Smathers, D

Georgia
*Richard B. Russell, D
**Herman E. Talmadge, D

Hawaii
***Hiram L. Fong, R
**Daniel K. Inouye, D

Idaho
**Frank Church, D
*Len B. Jordan, R

Illinois
*Paul H. Douglas, D
**Everett M. Dirksen, R

Indiana
***Vance Hartke, D
**Birch Bayh, D

Iowa
**Bourke B. Hickenlooper, R
*Jack Miller, R

Kansas
**Frank Carlson, R
*James B. Pearson, R

Kentucky
*John Sherman Cooper, R
**Thruston B. Morton, R

Louisiana
*Allen J. Ellender, D
**Russell B. Long, D

Maine
*Margaret Chase Smith, R
***Edmund S. Muskie, D

Maryland
***Joseph D. Tydings, D
**Daniel B. Brewster, D

Massachusetts
*Leverett Saltonstall, R
***Edward M. Kennedy, D

Michigan
*Pat McNamara, D
***Philip A. Hart, D

Minnesota
*Walter F. Mondale, D
***Eugene J. McCarthy, D

Mississippi
*James O. Eastland, D
***John Stennis, D

Missouri
***Stuart Symington, D
**Edward V. Long, D

Montana
***Mike Mansfield, D
*Lee Metcalf, D

Nebraska
***Roman L. Hruska, R
*Carl T. Curtis, R

Nevada
**Alan Bible, D
***Howard W. Cannon, D

New Hampshire
**Norris Cotton, R
*Thomas J. McIntyre, D

New Jersey
*Clifford P. Case, R
***H. A. Williams, Jr., D

New Mexico
*Clinton P. Anderson, D
***Joseph M. Montoya, D

New York
**Jacob K. Javits, R
***Robert F. Kennedy, D

North Carolina
**Sam J. Ervin, Jr., D
*B. Everett Jordan, D

North Dakota
**Milton R. Young, R
***Quentin N. Burdick, D

Ohio
**Frank J. Lausche, D
***Stephen M. Young, D

Oklahoma
**A. S. Mike Monroney, D
*Fred R. Harris, D

Oregon
**Wayne Morse, D
*Maurine B. Neuberger, D

Pennsylvania
**Joseph S. Clark, D
***Hugh Scott, R

Rhode Island
***John O. Pastore, D
*Claiborne Pell, D

South Carolina
**Donald Russell, D
*Strom Thurmond, R

South Dakota
*Karl E. Mundt, R
**George McGovern, D

Tennessee
***Albert Gore, D
*Ross Bass, D

Texas
***Ralph Yarborough, D
*John G. Tower, R

Utah
**Wallace F. Bennett, R
***Frank E. Moss, D

Vermont
**George D. Aiken, R
***Winston L. Prouty, R

Virginia
***Harry F. Byrd, Jr., D
*A. Willis Robertson, D

Washington
**Warren G. Magnuson, D
***Henry M. Jackson, D

West Virginia
*Jennings Randolph, D
***Robert C. Byrd, D

Wisconsin
***William Proxmire, D
**Gaylord Nelson, D

Wyoming
***Gale W. McGee, D
*Milward L. Simpson, R

HOUSE OF REPRESENTATIVES

(Democrats, 293; Republicans, 140; vacancies, 2; total, 435)

Speaker: John W. McCormack, Mass.
Clerk: Ralph R. Roberts

Majority Leader: Carl Albert, Okla.
Minority Leader: Gerald R. Ford, Mich.

Letters after representatives' names refer to party affiliation—D for Democrat, R for Republican. The abbreviation "At-L." in place of congressional district number means "representative at large." Asterisk (*) before member's name indicates reelection in 1964 (served in 88th Congress).

Alabama
1. W. J. Edwards, R
2. W. L. Dickinson, R
3. *George Andrews, D
4. Glenn Andrews, R
5. *A. I. Selden, Jr., D
6. J. H. Buchanan, R
7. J. D. Martin, R
8. *R. E. Jones, Jr., D

Alaska
At-L. *R. J. Rivers, D

Arizona
1. *J. J. Rhodes, R
2. *M. K. Udall, D
3. *G. F. Senner, Jr., D

Arkansas
1. *E. C. Gathings, D
2. *W. D. Mills, D
3. *J. W. Trimble, D
4. *O. Harris, D

California
1. *D. H. Clausen, R
2. *H. T. Johnson, D
3. *J. E. Moss, D
4. *R. L. Leggett, D
5. *P. Burton
6. *W. S. Mailliard, R
7. *J. Cohelan, D
8. *G. P. Miller, D
9. *D. Edwards, D
10. *C. S. Gubser, R
11. *J. A. Younger, R
12. *B. L. Talcott, R
13. *C. M. Teague, R
14. *J. F. Baldwin, Jr., R
15. *J. J. McFall, D
16. *B. F. Sisk, D
17. *C. R. King, D
18. *H. Hagen, D
19. *C. Holifield, D
20. *H. A. Smith, R
21. *A. F. Hawkins, D
22. *J. C. Corman, D
23. *D. Clawson, R
24. *G. P. Lipscomb, R
25. *R. B. Cameron, D
26. T. M. Rees, D
27. E. Reinecke, R
28. *A. Bell, R
29. *G. E. Brown, Jr., D
30. *E. R. Roybal, D
31. *C. H. Wilson, D
32. *C. Hosmer, R
33. K. W. Dyal, D
34. *R. T. Hanna, D
35. *J. B. Utt, R
36. *R. C. Wilson, R
37. *L. Van Deerlin, D
38. J. V. Tunney, D

Colorado
1. *B. G. Rogers, D
2. R. H. McVicker, D
3. F. E. Evans, D
4. *W. N. Aspinall, D

Connecticut
1. *E. Q. Daddario, D
2. *W. L. St. Onge, D
3. *R. N. Giaimo, D
4. D. J. Irwin, D
5. *J. S. Monagan, D
6. *B. F. Grabowski, D

Delaware
At-L. *H. B. McDowell, Jr., D

Florida
1. *R. L. F. Sikes, D
2. *C. E. Bennett, D
3. *C. Pepper, D
4. *D. B. Fascell, D
5. *A. S. Herlong, Jr., D
6. *P. G. Rogers, D
7. *J. A. Haley, D
8. *D. R. Matthews, D
9. *D. Fuqua, D
10. *S. Gibbons, D
11. *E. J. Gurney, R
12. *W. C. Cramer, R

Georgia
1. *G. E. Hagan, D
2. M. E. O'Neal, Jr., D
3. H. H. Callaway, R
4. J. A. Mackay, D
5. *C. L. Weltner, D
6. *J. J. Flynt, Jr., D
7. *J. W. Davis, D
8. *J. R. Tuten, D
9. *P. M. Landrum, D
10. *R. G. Stephens, Jr., D

Hawaii
At-L. *S. M. Matsunaga, D
At-L. P. T. Mink, D

Idaho
1. *C. I. White, D
2. G. V. Hansen, R

Illinois
1. *W. L. Dawson, D
2. *B. O'Hara, D
3. *W. T. Murphy, D
4. *E. J. Derwinski, R
5. *J. C. Kluczynski, D
6. D. Ronan, D
7. F. Annunzio, D
8. *D. Rostenkowski, D
9. S. R. Yates, D
10. *H. R. Collier, R
11. *R. C. Pucinski, D
12. *R. McClory, R
13. *D. Rumsfeld, R
14. J. N. Erlenborn, R
15. *C. T. Reid, R

16. *J. B. Anderson, R
17. *L. C. Arends, R
18. *R. H. Michel, R
19. D. G. Schisler, D
20. *P. Findley, R
21. *K. J. Gray, D
22. *W. L. Springer, R
23. *G. E. Shipley, D
24. *M. Price, D

Indiana

1. *R. J. Madden, D
2. *C. A. Halleck, R
3. *J. Brademas, D
4. *E. R. Adair, R
5. *J. E. Roush, D
6. *R. L. Roudebush, R
7. *W. G. Bray, R
8. *W. K. Denton, D
9. L. H. Hamilton, D
10. *R. Harvey, R
11. A. Jacobs, Jr., D

Iowa

1. J. R. Schmidhauser, D
2. J. C. Culver, D
3. *H. R. Gross, R
4. B. Bandstra, D
5. *N. Smith, D
6. S. L. Greigg, D
7. J. R. Hansen, D

Kansas

1. *R. Dole, R
2. C. L. Mize, R
3. *R. F. Ellsworth, R
4. *G. E. Shriver, R
5. *J. Skubitz, R

Kentucky

1. *F. A. Stubblefield, D
2. *W. H. Natcher, D
3. C. P. Farnsley, D
4. *F. Chelf, D
5. T. L. Carter, R
6. *J. C. Watts, D
7. *C. D. Perkins, D

Louisiana

1. *F. E. Hébert, D
2. *H. Boggs, D
3. *E. E. Willis, D
4. *J. D. Waggonner, Jr., D
5. *O. E. Passman, D
6. *J. H. Morrison, D
7. E. W. Edwards, D
8. S. O. Long, D

Maine

1. *S. R. Tupper, R
2. W. D. Hathaway, D

Maryland

1. *R. C. B. Morton, R
2. *C. D. Long, D
3. *E. A. Garmatz, D
4. *G. H. Fallon, D
5. H. G. Machen, D
6. *C. M. Mathias, Jr., R
7. *S. N. Friedel, D

At-L. *C. R. Sickles, D

Massachusetts

1. *S. O. Conte, R
2. *E. P. Boland, D
3. *P. J. Philbin, D
4. *H. D. Donohue, D
5. *F. B. Morse, R
6. *W. H. Bates, R
7. *T. H. Macdonald, D
8. *T. P. O'Neill, Jr., D
9. *J. W. McCormack, D
10. *J. W. Martin, Jr., R
11. *J. A. Burke, D
12. *H. Keith, R

Michigan

1. J. J. Conyers, Jr., D
2. W. E. Vivian, D
3. P. H. Todd, D
4. *E. Hutchinson, R
5. *G. R. Ford, R
6. *C. E. Chamberlain, R
7. J. C. Mackie, D
8. *J. Harvey, R
9. *R. P. Griffin, R
10. *E. A. Cederberg, R
11. R. F. Clevenger, D
12. *J. G. O'Hara, D
13. *C. C. Diggs, Jr., D
14. *L. N. Nedzi, D
15. W. D. Ford, D
16. *J. D. Dingell, D
17. *M. W. Griffiths, D
18. *W. S. Broomfield, R
19. B. S. Farnum, D

Minnesota

1. *A. H. Quie, R
2. *A. Nelsen, R
3. *C. MacGregor, R
4. *J. E. Karth, D
5. *D. M. Fraser, D
6. *A. G. Olson, D
7. *O. Langen, R
8. *J. A. Blatnik, D

Mississippi

1. *T. G. Abernethy, D
2. *J. L. Whitten, D
3. *J. B. Williams, D
4. P. Walker, R
5. *W. M. Colmer, D

Missouri

1. *F. M. Karsten, D
2. *T. B. Curtis, R
3. *L. K. Sullivan, D
4. *W. J. Randall, D
5. *R. Bolling, D
6. *W. R. Hull, Jr., D
7. *D. G. Hall, R
8. *R. H. Ichord, D
9. *W. L. Hungate, D
10. *P. C. Jones, D

Montana

1. *A. Olsen, D
2. *J. F. Battin, R

Nebraska

1. C. A. Callan, D
2. *G. Cunningham, R
3. *D. Martin, R

Nevada

At-L. *W. S. Baring, D

New Hampshire

1. J. O. Huot, D
2. *J. C. Cleveland, R

New Jersey

1. *W. T. Cahill, R
2. T. C. McGrath, Jr., D
3. J. J. Howard, D
4. *F. Thompson, Jr., D
5. *P. Frelinghuysen, R
6. *F. P. Dwyer, R
7. *W. B. Widnall, R
8. *C. S. Joelson, D
9. H. Helstoski, D
10. *P. W. Rodino, Jr., D
11. *J. G. Minish, D
12. P. J. Krebs, D
13. *C. E. Gallagher, D
14. *D. V. Daniels, D
15. *E. J. Patten, D

New Mexico

At-L. E. S. Walker, D
At-L. *T. G. Morris, D

New York

1. *O. G. Pike, D
2. *J. R. Grover, Jr., R
3. L. L. Wolff, D
4. *J. W. Wydler, R
5. H. Tenzer, D
6. *S. Halpern, R
7. *J. P. Addabbo, D
8. *B. S. Rosenthal, D
9. *J. J. Delaney, D
10. *E. Celler, D
11. *E. J. Keogh, D
12. *E. F. Kelly, D
13. *A. J. Multer, D
14. *J. J. Rooney, D
15. *H. L. Carey, D
16. *J. M. Murphy, D
17. ....
18. *A. C. Powell, D
19. *L. Farbstein, D
20. *W. F. Ryan, D
21. J. H. Scheuer, D
22. *J. H. Gilbert, D
23. J. B. Bingham, D
24. *P. A. Fino, R
25. R. L. Ottinger, D
26. *O. R. Reid, R
27. J. G. Dow, D
28. J. Y. Resnick, D
29. *L. W. O'Brien, D
30. *C. J. King, R
31. R. C. McEwen, R
32. *A. Pirnie, R
33. *H. W. Robison, R
34. J. M. Hanley, D
35. *S. S. Stratton, D
36. *F. J. Horton, R
37. B. B. Conable, Jr., R
38. *C. E. Goodell, R
39. R. D. McCarthy, D
40. H. P. Smith, III, R
41. *T. J. Dulski, D

North Carolina

1. ....
2. *L. H. Fountain, D
3. *D. N. Henderson, D
4. *H. D. Cooley, D
5. *R. J. Scott, D
6. *H. R. Kornegay, D
7. *A. Lennon, D
8. *C. R. Jonas, R
9. *J. T. Broyhill, R
10. *B. L. Whitener, D
11. *R. A. Taylor, D

North Dakota

1. *M. Andrews, R
2. R. W. Redlin, D

Ohio

1. J. J. Gilligan, D
2. *D. D. Clancy, R
3. R. M. Love, D
4. *W. M. McCulloch, R
5. *D. L. Latta, R
6. *W. H. Harsha, R
7. C. J. Brown, Jr., R
8. *J. E. Betts, R
9. *T. L. Ashley, D
10. W. H. Moeller, D
11. J. W. Stanton, R
12. *S. L. Devine, R
13. *C. A. Mosher, R
14. *W. H. Ayres, R
15. *R. T. Secrest, D
16. *F. T. Bow, R
17. *J. M. Ashbrook, R
18. *W. L. Hays, D
19. *M. J. Kirwan, D
20. *M. A. Feighan, D
21. *C. A. Vanik, D
22. *F. P. Bolton, R
23. *W. E. Minshall, R

At-L. R. E. Sweeney, D

Oklahoma

1. *P. Belcher, R
2. *E. Edmondson, D
3. *C. Albert, D
4. *T. Steed, D
5. *J. Jarman, D
6. J. Johnson, Jr., D

Oregon

1. *W. Wyatt, R
2. *A. Ullman, D
3. *E. Green, D
4. *R. B. Duncan, D

Pennsylvania

1. *W. A. Barrett, D
2. *R. N. C. Nix, D
3. *J. A. Byrne, D
4. *H. Toll, D
5. *W. J. Green, III, D
6. *G. M. Rhodes, D
7. G. R. Watkins, R
8. *W. S. Curtin, R
9. *P. B. Dague, R
10. *J. M. McDade, R
11. *D. J. Flood, D
12. *J. I. Whalley, R
13. *R. S. Schweiker, R
14. *W. S. Moorhead, D
15. *F. B. Rooney, D
16. *J. C. Kunkel, R
17. *H. T. Schneebeli, R
18. *R. J. Corbett, R
19. N. N. Craley, Jr., D
20. *E. J. Holland, D
21. *J. H. Dent, D
22. *J. P. Saylor, R
23. *A. W. Johnson, R
24. J. P. Vigorito, D
25. *F. M. Clark, D
26. *T. E. Morgan, D
27. *J. G. Fulton, R

Rhode Island

1. *F. J. St. Germain, D
2. *J. E. Fogarty, D

South Carolina

1. *L. M. Rivers, D
2. *A. W. Watson, R
3. *W. J. B. Dorn, D
4. *R. T. Ashmore, D
5. *T. S. Gettys, D
6. *J. L. McMillan, D

South Dakota

1. *B. Reifel, R
2. *E. Y. Berry, R

Tennessee

1. *J. H. Quillen, R
2. J. J. Duncan, R
3. *W. E. Brock, R
4. *J. L. Evins, D
5. *R. Fulton, D
6. W. R. Anderson, D
7. *T. Murray, D
8. *R. A. Everett, D
9. G. W. Grider, D

Texas

1. *W. Patman, D
2. *J. Brooks, D
3. *L. Beckworth, D
4. *R. Roberts, D
5. E. Cabell, D
6. *O. E. Teague, D
7. *J. Dowdy, D
8. *A. Thomas, D
9. *C. W. Thompson, D
10. *J. J. Pickle, D
11. *W. R. Poage, D
12. *J. Wright, D
13. *G. Purcell, D
14. *J. Young, D
15. E. de la Garza, D
16. R. C. White, D
17. *O. Burleson, D
18. *W. Rogers, D
19. *G. Mahon, D
20. *H. B. Gonzalez, D
21. *O. C. Fisher, D
22. *B. Casey, D

At-L. *J. R. Pool, D

Utah

1. *L. J. Burton, R
2. D. S. King, D

Vermont

At-L. *R. T. Stafford, R

Virginia

1. *T. N. Downing, D
2. *P. Hardy, Jr., D
3. D. E. Satterfield, III, D
4. *W. M. Abbitt, D
5. *W. M. Tuck, D
6. *R. H. Poff, R
7. *J. O. Marsh, Jr., D
8. *H. W. Smith, D
9. *W. P. Jennings, D
10. *J. T. Broyhill, R

Washington

1. *T. M. Pelly, R
2. L. Meeds, D
3. *J. B. Hansen, D
4. *C. May, R
5. T. S. Foley, D
6. F. V. Hicks, D
7. B. Adams, D

West Virginia

1. *A. A. Moore, Jr., R
2. *H. O. Staggers, D
3. *J. M. Slack, Jr., D
4. *K. Hechler, D
5. J. Kee, D

Wisconsin

1. L. E. Stalbaum, D
2. *R. W. Kastenmeier, D
3. *V. W. Thomson, R
4. *C. J. Zablocki, D
5. *H. S. Reuss, D
6. J. A. Race, D
7. *M. R. Laird, R
8. *J. W. Byrnes, R
9. G. R. Davis, R
10. *A. E. O'Konski, R

Wyoming

At-L. T. Roncalio, D

Puerto Rico

Resident Commissioner
Santiago Polanco-Abreu

WIDE WORLD

URBAN RENEWAL IN CONNECTICUT CITIES is creating many new urban centers, as in Hartford.

CONNECTICUT

Major events of 1965 in Connecticut were the adoption of a new constitution replacing the one in effect since 1818, and the reapportionment of the General Assembly.

New Constitution. A constitutional convention of 42 Democrats and 42 Republicans met from July 1 to October 28, and adopted a new constitution for the state. Voters approved the document on December 14 by a vote of 178,426 to 84,219.

The new constitution provides for a House of Representatives of 125 to 225 members, and a Senate of 30 to 50 members, with mandatory reapportionment every 10 years. Other provisions require a two-thirds vote, instead of a simple majority, to override the governor's veto; strengthen home rule powers for towns; speed up the process for amending the constitution; and provide for future constitutional conventions. Antidiscrimination sections were added to the state Bill of Rights. A controversial provision on eminent domain, giving greater protection to private property, was presented as a separate proposal, but it was defeated at the polls.

Reapportionment. The Assembly, originally elected in 1962, remained in office because of its failure to adopt a reapportionment plan in time for scheduled 1964 elections. The Assembly began a special reapportionment session in November 1964, and on Jan. 18, 1965, adopted a plan accepted as constitutional by the special federal court. The reapportionment bill provides for redrawing the 36 state Senate district lines, and reduces the membership of the House from 294 to 177, to be elected from newly drawn districts. The court then authorized the Assembly to convene on February 2 as the legal legislature for 1965. A new Assembly will be elected in November 1966.

Other Legislation. On budgetary matters the Democratic governor, John Dempsey, and the Senate were in conflict with the Republican House. They eventually accepted a $510,000,000 six-year road program sponsored by the Republicans, but succeeded in postponing a gasoline tax increase.

The Assembly adopted a court reorganization act which provides for more judges, year-round sessions, better salaries, and a new administrator for the entire system.

CONNECTICUT · Information Highlights

Area: 5,009 square miles.

Population: 2,752,000 (1965 est.).

Chief Cities (1965 est.): Hartford, the capital (158,000); Bridgeport (156,000); New Haven (151,000); Waterbury (106,000); Stamford (100,500); New Britain (85,500); Norwalk (75,000); West Hartford (67,500).

Government: *Chief Officers*—governor, John Dempsey (Democrat); lt. gov., Samuel J. Tedesco (D); secy. of state, Ella T. Grasso (D); atty. gen., Harold M. Mulvey (D); treas., Gerald A. Lamb (D); comm. of educ., William J. Sanders; chief justice, John Hamilton King. *Legislature*—General Assembly (convened Feb. 2, 1965); Senate, 36 members (23 Democrats, 13 Republicans); House of Representatives, 294 members (184 R, 110 D).

Education: *School enrollment* (1964–65)—public elementary, 392,513 pupils (14,300 teachers); public secondary, 167,566 pupils (10,150 teachers); nonpublic schools, 126,700 pupils (4,700 teachers); college and university (fall 1964), 72,957 students. *Public school expenditures* (1964–65)—$305,000,000 ($593 per pupil); average teacher's salary, $6,975.

Public Finance (fiscal year 1964): *Revenues*, $625,688,000 (sales tax, $111,917,000; motor fuel tax, $54,761,000; federal funds, $109,777,000). *Expenditures*, $612,139,000 (education, $136,284,000; health, welfare, and safety, $89,989,000; highways, $166,255,000). *State debt*, $629,742,000 (1964).

Personal Income (1964): $9,075,000,000; average annual income per person, $3,281.

Public Assistance (fiscal year 1965): $57,332,874 to 89,365 recipients (aged, $7,269,740; dependent children, $34,875,731).

Labor Force (employed persons, July 1965): *Agricultural*, 17,300; *nonagricultural* (wage and salary earners), 1,010,730 (37.8% manufacturing, 16.5% trade, 9.9% government). *Unemployed persons* (July 1965)—53,100.

Manufacturing (1963): Value added by manufacture, $4,477,894,000 (transportation equipment, $896,131,000; primary metals, $320,648,000; nonelectrical machinery, $684,324,000; electrical machinery, $476,181,000; fabricated metals, $397,054,000; food and products, $170,021,000).

Agriculture (1964): *Cash farm income*, $150,091,000 (livestock, $89,380,000; crops, $60,101,000; govt. payments, $610,000). *Chief crops* (tons)—tobacco, 7,000 (ranks 13th among the states); hay, 247,000; alfalfa, 86,000; potatoes, 70,350; apples, 30,720; peaches, 4,080.

Mining (1964): *Production value*, $21,850,000 (ranks 45th among the states). *Chief minerals* (tons)—lime, 39,000 (rank, 18th); sand and gravel, 10,088,000; stone, 5,864,000; clays, 212,000.

Fisheries (1964): *Commercial catch*, 5,000,000 pounds ($1,000,000). *Leading species*—blackback flounder, 957,000 pounds ($52,000); scup or porgy, 722,000 pounds ($82,000); whiting, 396,000 pounds ($10,000); clams, 326,000 pounds ($136,000).

Transportation: *Roads* (1964), 17,507 miles (16,340 paved); *motor vehicles* (1965), 1,463,673; *railroads* (1964), 1,629 miles; *airlines* (1965), 7 (89 airports).

Communications (1964): *Telephones* (1965), 1,535,900; *television stations*, 7; *radio stations*, 46; *newspapers*, 26 (daily circulation, 855,077).

Social welfare measures adopted provide for mental health services and day-care centers for disturbed children. The Assembly also authorized the creation of a protective services unit in the Welfare Department to assist abused, neglected, or abandoned children.

A commission on higher education was established to supervise and coordinate all public higher education in the state. Connecticut's colleges and universities had 45,000 undergraduates in September 1965, or 15% more than in 1964.

Birth Control. The U.S. Supreme Court declared unconstitutional Connecticut's famous 1879 law prohibiting dissemination of birth-control information and devices. A birth-control clinic was opened in New Haven.

Economy. Business boomed in Connecticut in 1965. Bank debits rose 14%; manufacturing employment, 3.1%; and residential construction, 12.2%. Connecticut ranked second among the states in per-capita income.

ALBERT E. VAN DUSEN
Professor of History, University of Connecticut

CONNOR, John T. See biographical sketch under UNITED STATES.

CONRAD, Charles, Jr. See biographical sketch under SPACE EXPLORATION.

NEW YORK THRUWAY AUTHORITY

CONSERVATION OF NATURAL BEAUTY, as in New York's Mohawk Valley, was aided by 1965 Highway Beautification Act, which encourages removal of roadside eyesores.

CONSERVATION

In many ways, 1965 brought new hope and confidence to those concerned with the conservation of America's natural resources. President Johnson, who has been more active in the field of conservation than any president since Theodore Roosevelt, called a White House Conference on Natural Beauty, which focused the country's attention on the creeping destruction of the urban and rural landscape. The president also asked the 89th Congress to surpass the splendid conservation record written by the 88th Congress in 1964, and Congress responded by passing the Highway Beautification Act, the Water Pollution Control Act, and the Food and Agricultural Act of 1965, as well as other measures to protect the natural heritage of the United States.

Nevertheless, as the country's population climbed to near the 200 million mark, all was not entirely hopeful for conservation. Agencies concerned with single-purpose or limited objectives in land use, notably those responsible for building big dams or major highways, caused conflicts and difficulties. Also, the proliferation of poorly planned or poorly

RURAL CONSERVATION is served by man-made pond on this farm in Taylor County, West Virginia. The pond provides water for stock, recreation, and fire protection.

UPI

supervised urban-industrial development continued to destroy or threaten to destroy both natural beauty and vital living space.

White House Conference on Natural Beauty. In Washington, D.C., on May 24 and 25, 1965, 1,000 persons attended the first White House Conference on Natural Beauty. Laurance S. Rockefeller was the chairman. The delegates, observers, and panelists considered means of improving the environment in which Americans live. Participants discussed the elimination or screening of junkyards, the control of highway billboards, the development of scenic roads and parkways, the landscaping of highways, the establishment of new city parks, open spaces, and recreation areas, and the planning of cities and suburbs. President Johnson told the conference that he would ask Congress to eliminate most billboards and junkyards from the country's highways. After the national conference, various state and regional groups met to discuss local problems.

Congress passed the Highway Beautification Act in October. The act provides for withholding federal highway funds from states that fail to eliminate billboards in scenic areas, or to screen or remove junkyards near rights-of-way on interstate and primary highways. In other legislation, Congress provided for the landscaping of some federal highways, and set up regulations to limit air pollution by automobile exhaust pipes.

Dams and Conservation. Vital wilderness areas, national parks, and other wild spaces were threatened during 1965 by the proposed construction of dams on some of the country's rivers. In Alaska, various groups continued to press for the construction of the Rampart Canyon Dam on the Yukon River. Many conservationists believed that this dam might do major damage to wildlife and wild land resources.

Conservationists who have felt secure about the future of the national parks were shocked by the proposal of the federal Bureau of Reclamation to build two massive dams—Bridge Canyon and Marble Canyon—in the Grand Canyon of the Colorado River. The Bridge Canyon Dam would create a 93-mile-long reservoir that would flood the inner gorge of the Grand Canyon National Monument and extend 13 miles into the national park. The Marble Canyon Dam would stop the flow of the Colorado 12½ miles upstream from the Grand Canyon National Park. Both dams would serve principally to produce hydroelectric power, which conservationists maintain can be produced more cheaply by the use of fuel-burning plants.

Other proposals that worried conservationists involved (1) the Tellico Dam on the Little Tennessee River, the last unimpounded river in the TVA system; (2) a dam at Lower Sun Butte in Montana that would back up a major reservoir into the incomparable Bob Marshall Wilderness Area of Montana; (3) a dam on the Sespe River in California that would threaten the few surviving California condors; and (4) the Spruce Park Dam on the middle fork of the Flathead River in Montana that would both destroy a potential addition to the national wild river conservation program and flood an important wilderness region. (See also DAMS.)

To balance this tendency toward destruction of wild country by dams, Congress considered a bill that would give immediate protection to some of the nation's wild rivers. This bill would establish as designated wild rivers the Salmon River and middle fork of the Clearwater in Idaho, the Rogue in Oregon, the Rio Grande in New Mexico, the Green in Wyoming, the Suwannee in Georgia and Florida, and nine other rivers. The first rivers to be set aside as a national riverway in 1965 were the Current and Jacks Forks rivers in the Ozark Mountains of Missouri.

Parks and Seashores. The creation in 1964 of the Canyonlands National Park in Utah was the first such action by Congress in 17 years. In May 1965, President Johnson signed a bill establishing the Nez Percé National Historical Park in Idaho.

Perhaps the most controversial proposal was that to establish the Redwoods National Park in northwestern California, advanced early in 1965 by the National Park Service. Creation of this park, which would protect the ancient redwood forests of California in an area now subject to logging, was opposed by the timber industry.

There is a developing national seashore system. In 1964 Congress approved the establishment of Fire Island National Seashore, New York. In 1965 it set aside the Assateague Island area, a 32-mile-long section off the coast of Maryland and Virginia as part of the system. (See also NATIONAL PARKS.)

UPI

SAVING FARMLAND is an important part of the conservation effort. Program in Monroe County, Wis., includes fallow sections, contour plowing, and protected streams.

Cropland Adjustment. The Food and Agricultural Act of 1965 contained a new farm program that held considerable hope for conservation. Title VI of this act enables the secretary of agriculture to enter into contracts with farmers to convert cropland into vegetative cover useful for soil, water, wildlife, or forest conservation. For five years about 8 million acres will be retired annually from crop use under this program and will be added to lands useful for conservation and public recreational purposes.

Research. An amendment to the Department of the Interior's appropriation bill for 1965–66, sponsored by Senator Karl Mundt of South Dakota, provided for a new research laboratory at the Patuxent Wildlife Research Center in Maryland. This laboratory will serve as a much-needed study facility for the preservation of such endangered wildlife as the whooping crane, California condor, Attwater prairie chicken, black-footed ferret, and Hawaiian nene.

Bills were introduced into Congress in 1965 to provide for research studies or surveys for the proper understanding, management, and preservation of natural environments. An ecological survey agency to be established within the Department of the Interior would be enabled to grant contracts to qualified universities, museums, or other agencies or individuals for the necessary research. The bills were not enacted in 1965.

Water Pollution. An expanded and strong Water Pollution Control Act was passed by Congress and signed into law. As a most important feature of this act, a Water Pollution Control Administration was created in the Department of Health, Education, and Welfare. A new assistant secretary to direct this agency has the primary responsibility for controlling water pollution, and will be provided with sufficient funds to establish standards, provide pollution-control demonstrations, and carry out essential studies. Severe drought in the northeastern United States served to point out the inadequate measures that previously had been taken in both watershed management and water pollution control. It was also learned that the water of such major rivers as the Potomac is too polluted to be useful for urban water supply. To alleviate the water shortage, the federal government continued its efforts in 1965 to develop desalinization plants along the eastern seaboard.

THE WHITE HOUSE

AT SIGNING OF HIGHWAY BEAUTIFICATION ACT on October 22, President Johnson presents a pen to Mrs. Johnson, who was one of the chief supporters of the bill.

Public Land Law Review. Congress established a Public Land Law Review Commission in 1965 to review the status of public lands and make recommendations for their retention or disposal. The commission was organized under Representative Wayne Aspinall of Colorado and began to take action. It will study lands in public ownership and recommend retaining those that have a primary value for domestic livestock grazing, timber production, wildlife protection, watershed control, outdoor recreation, or other public uses, if by transferring such lands to other ownership these uses would be lost. (See also WATER SUPPLY.)

RAYMOND F. DASMANN
Chairman, Division of Natural Resources
Humboldt State College

CONSUMER CREDIT

At the end of the first three quarters of 1965, consumer credit in the United States was at a peak of $81.9 billion. This represented a rise of $5.1 billion above the level of December 1964, and $8.4 billion above that of September 1964. Consumer credit includes all credit extended to individuals for household and personal expenditures, except real estate mortgage loans.

A rapid expansion of consumer credit began in March 1965 and consisted largely of the increased use of installment credit. Although repayments on installment loans in the first half of 1965 reached a record 14.4% of disposable personal income—that is, personal income remaining after payment of personal taxes and the like—consumers continued to add substantially to their installment debts.

The total consumer credit outstanding in September 1965 represented about 17% of total disposable personal income, or approximately the same ratio which prevailed in 1964. The new, higher level of consumer credit developed largely because of the use of such credit by more middle-income families, rather than an increase in consumer debt relative to the incomes of credit-using families.

Installment Credit. At the end of December 1964, the major portion of the $76.8 billion of consumer credit was installment credit totaling $59.4 billion. The latter consisted of $24.5 billion of installment sale credit on automobiles, most of which was provided by commercial banks and sales finance companies, and a relatively small portion by other financial institutions and automobile dealers. Installment credit for other consumer goods (secured usually by the items purchased, and including revolving credit plans of retail stores) amounted to $15.3 billion. About one half the total was provided by commercial banks and sales finance companies, and the other half by retail outlets such as department and furniture stores. Repair and modernization installment loans for owner-occupied dwellings totaled $3.5 billion, which was extended mostly by commercial banks. Personal installment loans (signature-alone borrowing) amounted to $16.1 billion, which was granted by commercial banks, sales finance companies, and other financial institutions.

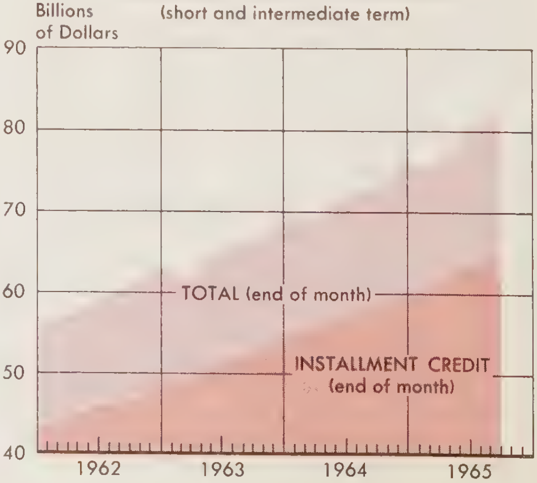
Noninstallment Credit. The minor portion of total consumer credit in 1964 was noninstallment credit totaling $17.4 billion. Single-payment loans, extended almost entirely by commercial banks, amounted to $6.5 billion. Charge accounts at stores amounted to $6.3 billion (including balances owed on credit card and home-heating oil accounts). Service credit, the amount owed by individuals to professional practitioners and service establishments for such items as medical care and public utility services, totaled $4.6 billion.

Trends in 1965. At the end of September 1965, consumer credit was 6.6% above the level in December 1964 and 11.4% above the level in September 1964. Installment credit was 9.1% above the year-end level, and 12.7% above the September 1964 level. These increases were slightly greater than those of the corresponding periods in 1963–64. Noninstallment credit was 0.2% below the year-end level, but it exceeded the level of September 1964 by 6.2%.

Automobile credit, the largest component in installment credit, showed increases in September of 12.7% and 13.6%, respectively, as compared with December and September of 1964. Credit for other durable goods declined in the first quarter, and then increased to a level in September slightly above the December level but 12.7% greater than a year earlier. Repair and modernization loans showed only a fractional increase. Personal loans were 10% higher than in December and 3.4% higher than a year earlier. Commercial banks supplied slightly more than half the total increase of installment credit in the first three quarters of 1965.

Single-payment loans, the largest component of noninstallment credit, showed increases in September of 6.1% and 8%, respectively, as compared with December and September 1964. Charge accounts at

CONSUMER CREDIT OUTSTANDING
(short and intermediate term)



stores declined in the first quarter of 1965 and then rose to a September level of 12.7% below the December 1964 level, but 5.7% higher than the level in September 1964. Service credit increased slightly in the first four months of the year, but then declined to a level in September 1965 about 2% higher than in December 1964, and 4.4% higher than a year before.

Clifford L. James
Professor of Economics
The Ohio State University

CONTRACT BRIDGE. See Sports.

COOPER, Leroy Gordon, Jr. See biographical sketch under Space Exploration.

COOPERATIVES. See Agriculture—*Farm Services.*

COPPER

World production of mined copper in 1964 rose to a record 5,420,000 short tons. This was 4% higher than the 1963 total of 5,210,000 tons, according to the U.S. Bureau of Mines. Chile, Zambia, and South West Africa all increased their output. The United States provided 23% of the world's mined copper in 1964; the USSR, an estimated 14.2%; Zambia, 13.7%; and Chile, 12.8%.

World output of smelter copper rose to a new record of 5,750,000 short tons, or almost 5% higher than the 1963 total of 5,480,000 tons.

U.S. Production. In 1964, domestic output of mined copper increased 3%, to a record 1,246,780 short tons. Production of smelter copper from domestic and foreign ores (exclusive of scrap) rose from 1,296,700 tons in 1963 to 1,338,433 tons in 1964. Arizona mined 55.4% of the national total, increasing its output in 1964 by 4.5%.

U.S. MINE PRODUCTION OF COPPER
(In short tons)

State	1961	1962	1963	1964
Arizona	587,100	644,200	660,977	690,988
California	1,400	1,200	916	1,035
Colorado	4,100	4,500	4,169	4,653
Idaho	4,300	3,900	4,172	4,666
Michigan	70,200	74,100	75,262	69,040
Missouri	1,500	2,700	1,816	2,059
Montana	104,000	94,000	79,762	103,806
Nevada	78,000	82,600	81,738	67,272
New Mexico	79,600	82,700	83,037	86,104
Tennessee	12,300	14,300	13,717	13,889
Utah	213,500	218,000	203,095	199,588
Others	9,200	6,200	4,505	3,680
Total	1,165,200	1,228,400	1,213,166	1,246,780

Source: U.S. Bureau of Mines.

In the first nine months of 1965, the U.S. mined recoverable copper output totaled 1,019,233 short tons—a 4% increase over the 910,426 tons mined in the first nine months of 1964. In the same periods, smelter output rose 9%, to 1,071,089 tons from 979,287 tons.

U.S. Consumption. Consumption of new copper in the United States was the largest since 1944, with 1964 showing an increase of 1,825,300 tons over 1963. Consumption of copper in the free world was estimated to be 10% higher in 1964 than in 1963.

U.S. Trade. U.S. imports of copper ore and concentrates in 1964 increased by 7%, with Canada supplying 48% of the total. There was an overall 6% increase in imports of blister copper. Imports of refined copper increased 16%, with Canada supplying 62%, and Peru 21%. Imports of scrap rose 56%.

U.S. exports of refined copper increased 2% over 1963, with West Germany, Italy, and Britain as the major importers. France, India, and Japan also took substantial shipments. Japan received 44% of the copper scrap and 77% of the copper-base scrap exported by the United States. (See also Mining.)

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COST OF LIVING

The general level of prices in the United States rose slightly in 1965. The average of retail prices of 400 items used to measure changes in the cost of living increased 1.3% in the first three quarters of 1965. In September the average was 1.7% higher than a year before, and 0.5% greater than the annual rate of increase for the six years following 1958. During these six years the average of wholesale prices for about 2,200 items fluctuated fractionally and increased only 0.1% for the entire period. However, in the first three quarters of 1965 the wholesale average increased 2.3%, and in September it was also 2.3% higher than a year earlier.

Consumer Spending. Demand for many consumer durables increased substantially during the year, particularly the demand for automobiles. Demand for nondurables and services increased appreciably and in about equal percentages. In general, total consumer spending expanded in each quarter of 1965. The substantial rise in total personal income and in disposable personal income came about partly because of the slight reduction of personal income taxes that took effect in 1965. In addition, the rate of personal saving decreased fractionally, and greater use was made of credit for consumer purchases. (See Consumer Credit).

In related areas, the levels of both federal government expenditures and business investments rose in 1965 over 1964.

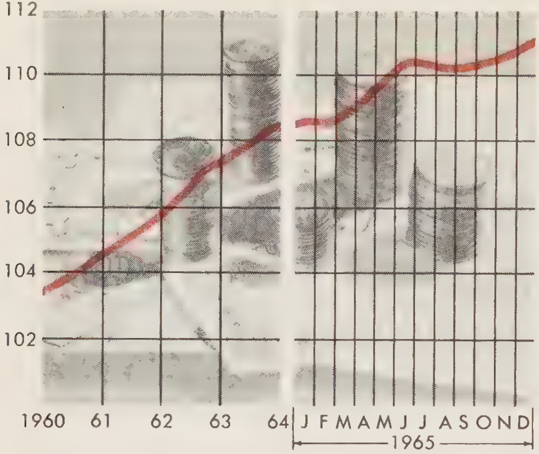
Production. In 1965, as before, producers were able to supply large quantities of goods. Total crop production was estimated to be slightly above the all-time record of 1963. However, unfavorable weather restricted supplies of vegetables and fruits until the latter part of the year. Also, marketings of hogs and cattle were curtailed as a result of stockmen's reductions in breeding herds because of the low prices that prevailed in 1963 and 1964. Many industries operated slightly below their capacity, but the rate of use of production facilities was generally higher than in 1964.

In a few instances—for example, household appliances, television and radio sets, floor coverings, and textile products of manmade fibers—the increased availability of supplies and vigorous competition among sellers slightly lowered wholesale prices. During the second half of the year total employment improved, and shortages of technicians and skilled workers appeared in many industries.

Consumer Price Index and Retail Prices. The consumer price index (1957–59=100), which shows average changes in retail prices of important goods and services purchased by city dwellers, rose from 108.8 in December 1964 to 110.2 in September 1965. The cost of living in September exceeded the December 1964 level by 1.3% and the September 1964 level by 1.7%. In broad groups of items, the prices of services were up 2.6% in September 1965 over a year earlier; nondurable commodities, up 2.1%; and durable commodities, up 1.1%.

In specific components of items included in the index, the average of retail food prices (which have "weight" or importance in the index of slightly more

Index **CONSUMER PRICE INDEX** (1957-59=100)



than one fifth of the total) was 2.3% higher in September than a year ago. The rise in food prices during the spring and summer was a major contribution to the advance of the overall index. The average price of meats, poultry, and fish showed the greatest increase—8.3%—which was due largely to higher meat prices. Cereals and bakery products, and dairy products showed an increase in price of 1.3% and 0.7%, respectively. Prices of fresh fruits and vegetables rose sharply in May, June, and July to higher levels than in 1964, and then declined to a level in September that was 3.3% lower than in 1964.

Prices of housing items (which have weight in the index of about one third of the total) were 1.1% higher in 1965 than a year earlier, largely because of higher rents and higher costs of homeownership. The average of prices for fuel and utilities declined and was only 0.2% higher in September than a year earlier. This decline was due mainly to lower prices of gas and electricity. Prices of household furnishings in September were only fractionally higher than a year before.

CONSUMER PRICE INDEX FOR EIGHT LARGE CITIES
(1957–59 =100)

City	August 1965	August 1964	Percent change 1964 to 1965
Chicago	107.7	106.3	1.3
Cleveland	107.1	105.2	1.8
Detroit	106.8	104.3	2.4
Los Angeles	111.5	110.2	1.2
New York	112.6	110.5	1.9
Philadelphia	110.6	108.6	1.8
Seattle	111.5	110.3	1.1
Washington, D.C.	109.6	108.7	0.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

The average of apparel prices (with weight of about one tenth) increased 1.2% during the 12-month period prior to September 1965, due mainly to higher prices of footwear. Prices of women's and girls' apparel increased slightly.

Prices of transportation (with weight of about one seventh) in September were 1.9% higher than a year earlier. This increase was the result of appreciably higher prices for both public and private transportation.

Of the remaining components of the index, prices of medical care and of miscellaneous goods and services increased 2.6% and 3.4%, respectively. The average of prices for reading materials and recreation remained approximately the same as a year earlier. The cost of personal care decreased fractionally.

Consumer Price Indexes for Urban Areas. Prices of items included in the cost-of-living index are collected in 50 cities that are representative of urban areas in the United States. Separate indexes are calculated for each of the 17 largest cities. Figures for eight of these having indexes available in August are presented in the accompanying table. Comparison of city indexes shows that prices in one place may have changed more or less than in another. The indexes do not measure absolute differences in the cost of living between cities.

Among the eight cities represented in the table, the greatest increase in the cost of living between the 1957–59 base period and August 1965 occurred in New York (12.6%). The smallest increase occurred in Detroit (6.8%). During this period the national consumer price index increased 10.0%. From August 1964 to August 1965, the greatest increase in the cost of living occurred in Detroit (2.4%), and the smallest increase in Washington (0.8%). During this one-year period the national consumer price index increased 1.7%.

Wholesale Commodity Prices. The monthly wholesale price index of the U.S. Bureau of Labor Statistics rose rather steadily in the first three quarters of 1965. Higher prices for farm products and processed foods were mainly responsible for the appreciable increase in the index during the first half of the year. The average of industrial prices rose fractionally each quarter. In September the wholesale index (1957–59 = 100) reached an all-time high of 103, or 2.3% higher than a year earlier and 1.7% higher than the previous record high in September 1962.

The prices of farm products rose substantially in the first half of 1965 to the highest level in almost three years. They declined fractionally in the third quarter, but the average in September was 4% higher than a year before. Prices of livestock and live poultry were up 13%; of eggs, up 10%; and of fluid milk, up 1.4%. Prices of fruits and vegetables, plant and animal fibers, and grains were slightly lower than a year earlier.

The average of prices for processed foods declined fractionally in the first quarter of 1965, but rose thereafter to a level in September that was 4.4% higher than a year earlier. Prices of meats, poultry, and fish were up 9.6%; of crude vegetable oils, up 14.4%; and of animal fats and oils, up 22.4%. Substantially higher prices prevailed for refined vegetable oils and end products, sugar and confectionery, and miscellaneous items. Fractionally higher prices prevailed for cereal and bakery products, and dairy products. Only two subgroups, canned and frozen fruits and vegetables, and packaged beverage materials, were lower in price than a year earlier—0.6% and 4%, respectively.

The average of industrial prices in September 1965 was 1.6% higher than in September 1964. Prices of hides, skins, leather, and leather products were up 5.6%; of fuels and related products, up 4.2%; and of metals and metal products, up 3.2%. Appreciably higher prices prevailed for rubber products, lumber, pulp and paper, and miscellaneous products. Fractionally higher prices prevailed for textile products and apparel, chemicals, and all types of machinery. Prices of nonmetallic mineral products, tobacco products, and bottled beverages remained unchanged. Only one subgroup of the industrial index, furniture and other household durables, showed a decline (0.9%) in the 12-month period.

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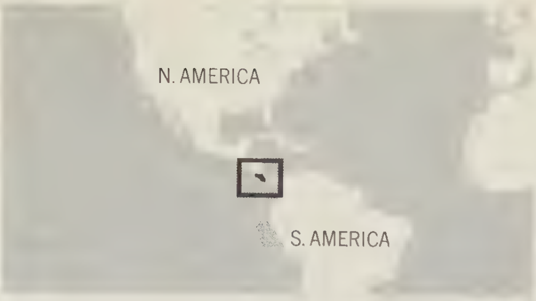
COSTA RICA



Costa Rican agriculture began a steady recovery in 1965 from the devastation caused by volcanic ash from Mount Irazú, which had been active from March 1963 to October 1964. Increased exports, especially to other member nations of the Central American Common Market (CACM), helped offset losses in agricultural production.

Agricultural Recovery. Crops recovered well from damage caused by volcanic ashfall in the Irazú area, and from insect damage in drought-stricken Guanacaste Province. Nevertheless, the 1964–65 coffee harvest was 50,000 metric tons under the expected 150,000 metric tons. In late 1965 the 1965–66 coffee crop was estimated at 120,000 metric tons. Coffee sales, initially slow to revive, showed nearly 90% recovery by the end of 1965.

Only corn, rice, and black beans, among major crops, remained substantially below normal levels. Milk production was back to normal because many dairymen moved from the Irazú area to the San Carlos Valley. Banana production expanded in 1965, partly because the Standard Fruit Company resumed exports to Europe.

In August the Inter-American Development Bank approved a $5.2 million loan to rehabilitate the zones harmed by volcanic eruption, and to resettle 500 families. The six-month drought in Guanacaste Province, and a massive mudslide on Irazú, near Cartago, in late November harmed agricultural production in those areas.

COSTA RICA · Information Highlights

Area: 19,575 square miles.
Population: 1,439,000 (May 31, 1965 est.).
Chief Cities (1963 census): San José, the capital, 101,162; San Sebastián, 23,166; Guadalupe, 21,413; Alajuela, 19,620.
Government: *President*—Francisco Orlich Bolmarich; First Vice President—Raúl Blanco Cervantes. *Congress*—57 members; party seating (1965): National Liberation (PLN), 29; National Republican (PRN), 19; National Union (PUN), 8; Popular Democratic Action (ACP), 1.
Religious Faiths: Roman Catholics, 78% of population; others, 22%.
Education: *Literacy rate* (1963)—84% of population aged 15 and over. *Total school enrollment* (1963)—298,169 (primary, 249,346; secondary, 33,622; teacher-training, 2,385; technical, 7,013; higher, 5,803).
Finance (1965 est.): *Revenues,* $72,100,000; *expenditures,* $69,500,000; *public debt* (1963), $112,100,000; *monetary unit,* colon (6.62 colones equal U.S.$1).
Gross National Product (1964): $552,000,000.
National Income (1964): $471,000,000; average annual income per person, $340.
Economic Index: *Cost of living* (1964), 114 (1958=100).
Manufacturing (metric tons): Sugar (1964), 115,000; cement (1964), 33,000; beer (1963), 8,460; lumber (1962), 268,000 cubic meters.
Crops (metric tons, 1964–65 crop year): Coffee, 49,000 (ranks 15th among world producers; cocoa beans, 12,000 (world rank, 12th); dry beans (1963–64), 21,000.
Minerals (metric tons, 1964): Salt, 20,000; lime, 6,400; diatomite, 1,800; manganese (1963), 600; gold, 3,000 troy ounces.
Foreign Trade (1964): *Exports,* $113,900,000 (chief exports: coffee, $48,100,000; bananas, $28,290,000; cacao, $4,060,000); *imports,* $138,600,000 (chief imports, 1963: electrical machinery, $7,852,000; petroleum products, $7,426,000; iron and steel, $5,878,000). *Chief trading partners* (1963): U.S. (took 56% of exports, supplied 48% of imports); West Germany (took 18% of exports, supplied 12% of imports); Netherlands (took 6% of exports, supplied 3% of imports).
Transportation: *Roads* (1964), 11,931 miles (683 paved); *motor vehicles* (1964), 33,713 (automobiles 22,017); *railways* (1963), 407 miles; *merchant vessels* (1964), 3 (8,000 gross registered tons); *national airlines,* LACSA; *principal airport,* El Coco, near San José.
Communications: *Telephones* (1964), 20,400; *television stations* (1964), 3; *television sets* (1964), 35,000; *radios* (1961), 81,000; *newspapers* (1961), 6 (daily circulation, 115,000).

Economic Conditions. Higher coffee prices on the international market, increased exports of sugar to the United States and of manufactured goods to CACM countries, helped the Costa Rican economy in 1965. On July 20 a barter bill was promulgated to widen trade with East Germany, Yugoslavia, Poland, Nationalist China, Austria, Sweden, and other countries.

Foreign investment in new plants in Costa Rica took an upward swing in 1965. Important investments were made in new plants for bauxite extraction, and for the manufacture of insecticides, textiles, cigarettes, vegetable oils, and tires.

A "March of the Unemployed" on the presidential palace took place in June. Unemployment in Costa Rica continued to average about 15%, with about 15,000 new job seekers entering the labor force annually. Doctors, government workers, teachers, and pharmacists were promised wage increases for 1966.

Election Campaigns. Campaigning began in 1965 for the presidential and congressional elections scheduled for Feb. 6, 1966. The incumbent National Liberation party, pledged to a Socialistic welfare program, backed Dr. Daniel Oduber Quiros, a lawyer. His opponent for the presidency is José Joaquín Trejos Fernández, former dean of economics at the University of Costa Rica. Trejos, the candidate of the National Unification party, was endorsed by several other opposition parties. The opposition, essentially a coalition of conservative parties, charged that government restrictions and lack of easy credit have stifled private initiative and slowed industrial expansion.

Foreign Affairs. The Revolutionary Recovery Movement, an anti-Castro group, ended an 18-month training period in Costa Rica in March.

In May, Costa Rica voted in favor of the creation of the Inter-American Peace Force to help restore order in the Dominican Republic. It was among the first countries to send volunteers to serve in the force. In August, President Orlich issued a statement explaining that the government opposed unilateral intervention in the Western Hemisphere, but would support a permanent inter-American force to prevent Communist take-overs.

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COTTON

The 1965 U.S. cotton crop, estimated at 15,059,000 bales (of 500 pounds each), was down about 1% from the 15,180,000 bales produced in 1964, but nearly 3% above the 1959–63 annual average of 14,670,000 bales. The national 1965 average of 531 pounds of lint (unginned cotton) per harvested acre exceeded the record 1964 yield by 14 pounds, and the 5-year average by 67 pounds. As before, California, with 1,142 pounds per acre, had the highest yield among the states.

Cotton was planted on 14,152,000 acres—684,000 less than in the previous year, and 1,775,000 below the 5-year average. Of this total, 14,074,700 acres were planted in Upland cotton and 77,300 acres in American Egyptian. The crop included 85,800 bales of American Egyptian cotton.

COTTON PRODUCTION BY LEADING STATES[1]

State	Average 1959–63 (bales)	1964 (bales)	1965 (bales)
Texas	4,538,000	4,122,000	4,725,000
Mississippi	1,712,000	2,232,000	2,020,000
California	1,837,000	1,760,000	1,725,000
Arkansas	1,457,000	1,570,000	1,450,000
Alabama	735,000	889,000	845,000
Arizona	835,000	799,000	775,000
Tennessee	601,000	671,000	640,000
Louisiana	540,000	590,000	565,000
Georgia	535,000	617,000	560,000
South Carolina	429,000	558,000	500,000
Missouri	455,000	409,000	390,000
Oklahoma	371,000	287,000	365,000
New Mexico	291,000	257,000	235,000
North Carolina	292,000	374,000	225,000
Other states	43,000	45,000	39,000
U.S. total	14,670,000	15,180,000	15,059,000

[1] In 500-pound gross-weight bales containing about 480 pounds of lint. (Source: Statistical Reporting Service, U.S. Department of Agriculture.)

Record U.S. Supply. Cotton stocks carried over into the 1965–66 marketing year totaled 14,291,000 bales, or 1,913,000 more than a year earlier. With the second largest carry-over in history, the 1965–66 total cotton supply, including imports, was estimated at 29,485,000 bales. This total exceeded the 1964–65 supply by 1,744,000 bales and constituted the greatest U.S. supply on record.

World Production. Total cotton output of all countries in crop year 1965, estimated at 52,034,000 bales, narrowly topped the preceding season's record of 52,017,000 bales (revised estimate) by 17,000 bales. It exceeded the 1955–59 average by 19%. Production outside the United States amounted to 36,875,000 bales, compared with the crop-year 1964 output of 36,837,000 bales and the 1955–59 average of 30,873,000 bales. World acreage was slightly higher and yields slightly lower than before.

COTTON PRODUCTION BY LEADING COUNTRIES[1]

Country	Average 1955–59 (bales)	1964 (bales)	1965 (bales)
United States	13,013,000	15,180,000	15,059,000
USSR	6,750,000	8,200,000	7,800,000
China, Communist	7,360,000	5,700,000	5,800,000
India	3,991,000	4,900,000	5,100,000
Mexico	2,032,000	2,395,000	2,300,000
Brazil	1,490,000	2,100,000	2,150,000
United Arab Republic	1,807,000	2,315,000	...
Pakistan	1,376,000	1,747,000	1,850,000
Turkey	734,000	1,500,000	1,350,000
Syria	441,000	810,000	825,000
Peru	518,000	645,000	600,000
Argentina	539,000	625,000	...
Iran	307,000	530,000	625,000
Nicaragua	184,000	550,000	450,000
Spain	209,000	355,000	365,000
Guatemala	59,000	312,000	350,000

[1] All production, other than U.S., is in bales of 480 pounds net. U.S. production is in 500-pound gross-weight bales which, however, contain about 480 pounds of lint. Years shown refer to crop years beginning August 1. (Source: Foreign Agricultural Service, U.S. Department of Agriculture.)

Free-world production outside the United States in crop year 1965 was over a third of a million bales higher than the record production of the previous season, and marked the sixth consecutive year that a new record had been set.

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CREDIT, Consumer. See Consumer Credit.

CREDIT UNIONS, Federal. See Social Security.

CRIME

Again in 1965, crime continued its upward trend throughout the world. Especially disturbing was the rise in crimes of violence and the increase in juvenile delinquency. This article reviews the subject under the following headings: (1) Crime Trends; (2) Delinquency Trends and Prevention Programs.

CRIME TRENDS

Crime in the United States was 5% higher in the first six months of 1965 than in the same period of 1964, according to the Uniform Crime Reporting Program of the Federal Bureau of Investigation (FBI). Suburban areas showed an upward trend of 9%, and rural areas, 1%. All cities had crime increases, ranging from 2% in cities with more than 1 million population to 9% in cities with 100,000 to 250,000 population.

Crimes of violence were up, led by forcible rape, with an increase of 7%, followed by murder, with an increase of 6%; robbery, 5%; and aggravated assault, 3%. Property offenses also increased, with burglary and larceny ($50 and over) up 6% each, and auto theft up 4%.

Serious Crimes. In the United States in 1964, serious crimes increased 13% over 1963, with an all-time high of 2,604,400 offenses. These included murder, forcible rape, robbery, aggravated assault, burglary, larceny ($50 and over), and auto theft. Crimes against property showed an overall increase of 13%. Auto theft climbed 16%; larceny ($50 and over), 13%; and burglary, 12%. Crimes against the person showed a 15% rise as a group, with forcible rape up 21%; aggravated assault, 17%; robbery, 12%; and murder, 8%.

Since 1958 the incidence of crime has outpaced the growth of population almost six times, and this trend is continuing. While the major portion of the increase was due to the rise in crimes to property, alarming increases were also recorded in crimes of violence—murder, forcible rape, robbery, and aggravated assault. Since 1958, violent crimes as a group have increased three times faster than the population growth. In 1964 each type of violent crime showed a substantial rise when related to population, with the murder rate up 7%, forcible rape up 20%, robbery up 10%, and aggravated assault up 15%.

For each 1,000 persons in the United States in 1964, there were 14 serious crimes and victims. More than 1,110,000 burglaries were committed, and stolen property was valued at over $971,000,000. Areas having the fastest growing populations generally reported the highest crime rates.

Arrests. Of a total of 4,685,080 persons arrested in the United States, 4,138,099 were males, and 546,981 were females. Young people under 18 years of age continued to show an increasing involvement in unlawful activity. Nationwide arrests of these persons for all offenses, except traffic violations, were up 17% during the 1964 calendar year. Youthful offenders comprised 9% of arrests for murder, 15% for aggravated assault, 19% for forcible rape, 28% for robbery, 51% for burglary, 54% for larceny, and 64% for auto theft.

Of 4,381,419 arrests, white persons accounted for 3,053,818. Negroes accounted for 1,194,377, American Indians for 99,195, Chinese for 1,097, Japanese for 2,488, and all others (including those listed as race unknown) for 30,444.

Police Data. Eighty-eight law-enforcement officers died in the line of duty in 1964, 57 of them murdered by criminals. Ten of every 100 officers were victims of attacks in 1964. Atlhough the total number of persons employed as local and state police increased substantially during 1964, the ratio of police to population remained at 1.9 police employees per 1,000 population, as in 1963.

J. Edgar Hoover
Director, Federal Bureau of Investigation

DELINQUENCY TRENDS AND PREVENTIVE PROGRAMS

The most reliable statistical reports on juvenile delinquency, the FBI's *Uniform Crime Reports* and the U.S. Children's Bureau's *Juvenile Court Statistics*, show a substantial increase in juvenile delinquency since 1948, after a decline immediately following World War II.

Juvenile Delinquency in the U.S. In 1964 about 686,000 juvenile delinquency cases (excluding traffic offenses) were handled by the juvenile courts in the states, involving some 591,000 children aged 10 through 17. The total shows an increase of 14% over the previous year, while the child population increase was only 4%. More than four times as many boys as girls were referred to juvenile courts. Most of the offenses were committed against property, but a growing proportion are of a violent type.

The rate of delinquency (the number of cases per 1,000 child population) was about three times higher in predominantly urban areas than in rural regions. Although increases in delinquency have occurred in suburban and rural areas, the greatest increase is in the "inner city" areas of the large metropolitan centers, where there is a concentration of economic deprivation, family problems, educational deficiencies, school dropouts, and adult crime. The average age of juveniles coming to the attention of police has become lower, with more youths in their early teens involved.

UPI

CRIME-PREVENTION program for Philadelphia's subway includes patrol of platforms by policemen with dogs.

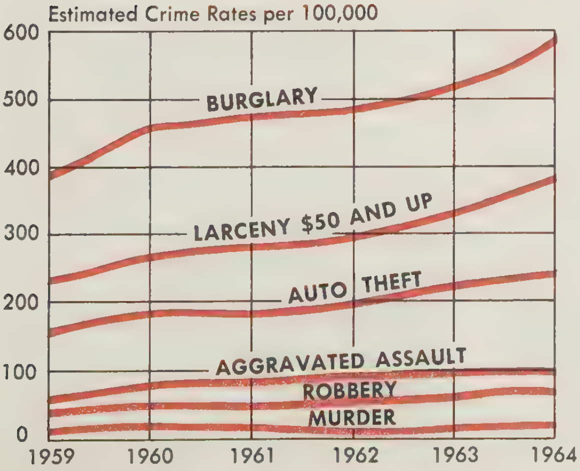
International Trends. Nearly all countries have experienced increases in law violation, including violent gang activities and riots. In every country the chief burden of dealing directly with offenders is carried by the established agencies of government, especially the police, courts, correctional institutions, and related probation and parole services.

The Third UN Congress on the Prevention of Crime and the Treatment of Offenders met in Stockholm, Sweden, on Aug. 9–18, 1965. More than 1,000 government officials, research specialists, and other experts, representing 75 nations, took part in the deliberations. The theme of the congress was "Prevention of Criminality," and the main subjects discussed were: (1) social change and criminality; (2) social forces and the prevention of criminality, with emphasis on the role of the public, the family, and educational and occupational opportunities; (3) community prevention action, particularly medical and social programs; (4) measures to combat recidivism (relapse into delinquency); (5) probation and noninstitutional measures; and (6) special pre-

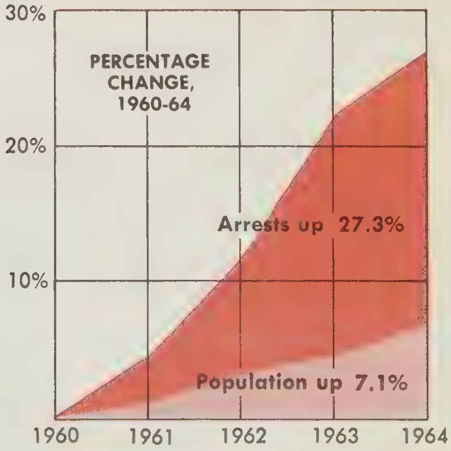
Arrests in U.S. for criminal offenses (by age groups):

Ages	1959	1960	1961	1962	1963	1964
Under 18	320,669	526,905	566,682	653,359	788,762	961,132
18-24	451,914	654,482	703,406	748,841	881,099	958,509
25-34	587,203	786,725	805,973	832,639	874,547	857,590
35-44	580,282	792,612	818,109	869,276	910,502	877,125
45-49	240,375	320,587	328,812	342,843	356,670	343,323
50 and over	430,007	595,021	626,176	667,539	696,097	684,698
Age not known	2,524	2,504	2,667	2,461	3,158	2,703

PROFILES OF U.S. CRIME



NUMBER OF ARRESTS AND POPULATION GROWTH



ventive and treatment measures for young adult criminals. The United Nations also conducted regional training courses in Cairo and Monrovia, and held a series of international training courses in Asia and the Far East for public officials concerned with law enforcement, correction work, and preventive programs.

U.S. Government Programs. On July 26, 1965, President Johnson named a 19-member Commission on Law Enforcement and Administration of Justice, with Attorney General Nicholas deB. Katzenbach as chairman. The commission has wide authority to seek out "comprehensive national answers" to the mounting crime problem. Its chief assignment is to make a nationwide study of the whole field of crime problems, ranging from the analysis of cases to the rehabilitation of offenders. The Juvenile Delinquency and Youth Offenses Control Act was extended through the fiscal year 1967 to enable the completion of the comprehensive community programs launched under the act, and to afford an opportunity to evaluate the results. The focus is now primarily on smaller short-term, specialized demonstration and training projects. Special attention is being given to manpower needs and training in crime and delinquency prevention.

State Programs. The Juvenile Delinquency Committee of the National Governor's Conference has actively supported efforts to coordinate various delinquency-prevention programs operated by state agencies. The National Council of Juvenile Court Judges launched a training program in 1962 for juvenile and family court judges and personnel, administered under a grant from the National Institute of Mental Health. Since then, training institutes and conferences have been conducted in various regions, and studies have been made of the judges themselves. (It is estimated that of the 9,000 judges in the United States, approximately 3,000 are given statutory responsibility for juvenile court jurisdiction, of whom only 250 exercise full-time juvenile court responsibilities.)

The increase in juvenile crime has outstripped correctional facilities, and the increasing cost of institutional care has led to experimentation with substitutes for incarceration. Correctional practitioners are increasingly recognizing the important part the community can play in the correctional process, as evidenced by the California and Provo, Utah, community-centered correctional experiments. Correctional programs built around community facilities, to supplement or replace penal incarceration, proceed on the assumption that the most effective method to redirect behavior is to operate in an environment that most nearly approximates the kind of social world in which juveniles must learn to live as law-abiding citizens.

Bibliography. *The International Bibliography on Crime and Delinquency*, obtainable from the National Institute of Mental Health, Bethesda, Md., is the most comprehensive bibliographical source on crime and delinquency. Prepared for the National Clearinghouse for Mental Health Information by the Information Center on Crime and Delinquency of the National Council on Crime and Delinquency, the bibliography contains annotated references and citations, as well as abstracts of current literature on crime and delinquency, and summaries of continuing projects.

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CROPS. See AGRICULTURE; FRUITS; GRAINS; VEGETABLES.

CROSS-COUNTRY. See SPORTS.

CUBA

Premier Fidel Castro surprised the world on Sept. 28, 1965, when he announced in a radio and television speech from Revolutionary Square in Havana, that all Cubans, except those of military age, who wished to leave Cuba would be free to do so. The United States government, although unsure of the intentions behind this statement, took up Castro's challenge. On October 3, President Johnson declared that "those in Cuba who seek freedom" would be permitted "to make an orderly entry into the United States of America." After more than a month of negotiations, an agreement was reached that may result in 300,000 Cubans immigrating to the United States within the next seven or eight years.

Neither the Cuban nor the United States government expected the refugee agreement to improve relations between the two nations. In 1965, Cuba maintained its policy of hostility toward the United States and continued its subversive activities in the Western Hemisphere. It seemed clear that Castro, who had vacillated in the past, had decided to side with the Soviet Union in the Sino-Soviet ideological dispute. At home, Castro struggled to consolidate his dictatorship, to build up the economy, and to reactivate revolutionary fervor.

Cuban Exodus. In early October, a week after the exchange between Castro and Johnson, Castro established a refugee embarkation port at Camarioca, and Cubans began an exodus to Florida in small boats sent by their relatives in the United States. The U.S. government tried to discourage this illegal and dangerous method of entry and initiated negotiations, through the Swiss embassy in Havana, for an orderly transfer of emigrants. An agreement was reached on November 6, but before that date at least 3,000 Cubans had reached Florida by boat, and several others were lost at sea.

By the terms of the November 6 accord, 3,000 to 4,000 Cubans were to be airlifted to Miami, Fla., each month, with priority given to those with close relatives in the United States. The flights began on December 1. Prior to 1965, the United States had spent $185 million to assist Cuban refugees; $30 million was budgeted for 1965, and Congress appropriated another $12.6 million to handle the new situation.

Observers, speculating on Castro's reasons for permitting the exodus, felt that he wished to rid Cuba of discontented citizens while easing the shortage of consumer goods at home. The Castro regime also would benefit by confiscating the property of the emigrants. Castro commented that "this revolution should be a free association of people who want to live here."

U.S.-Cuban Relations. Some officials in the United States and Cuba privately thought that the indirect negotiations on the matter of refugees would ease tensions between the two nations and might pave the way for their resumption of trade and diplomacy, but publicly the Cuban government continued its harangues against "Yankee imperialism," and the United States pursued its policy of isolating Cuba.

On Jan. 1, 1965, the sixth anniversary of his seizure of power, Castro displayed land-to-land missiles and jet planes supplied by the Soviet Union, and censured the United States as Cuba's enemy. Four days later Cuba and Communist China announced the conclusion of a five-year trade pact designed to make "new contributions to the struggle

CUBA · Information Highlights

N. AMERICA
S. AMERICA

Area: 44,218 square miles.
Population: 7,631,000 (July 1, 1965 est.).
Chief Cities (est.): Havana, the capital, 978,400 (1964); Marianao, 230,000 (1960); Santiago de Cuba, 219,800 (1964); Camagüey, 162,400 (1964).
Government: *President*—Dr. Osvaldo Dorticós Torrado (took office July 18, 1959); *Premier*—Fidel Castro Ruz (seized power Jan. 1, 1959).
Religious Faiths: Roman Catholics, 79% of population; others, 21%.
Education: *Total school enrollment* (1962)—1,322,763 (primary, 1,121,009; secondary, 123,118; teacher-training, 18,525; technical, 42,502; higher, 17,609).
Finance (1965 est.): *Revenues,* $2,535,000,000; *expenditures,* $2,535,000,000; *monetary unit,* peso (1 peso equals U.S.$1).
Gross National Product (1963): $3,891,000,000.
National Income (1963): $3,697,000,000; average annual income per person, $513.
Agricultural Production Index (1963): 85 (1956–57=100).
Manufacturing (metric tons): Sugar (1964), 6,000,000; gasoline (1961), 710,000; cement (1964), 350,000.
Crops (metric tons): Rice (1964), 160,000; citrus fruits (1964), 86,000; peanuts (1962), 15,000; sisal (1963), 10,000; coffee (1962), 3,000; cocoa beans (1964), 2,000.
Minerals (metric tons, 1964): Manganese, 75,700 (ranks 16th among world producers); nickel, 17,000 (rank, 4th); salt (1963), 80,000; chromite (1963), 50,600; pyrites, 30,500; copper (1963), 6,000; iron ore, 1,000.
Foreign Trade (1964): *Exports,* $714,000,000 (chief exports to the free world, 1962: sugar, $115,410,000; molasses, $19,415,000; tobacco, $17,894,000); *imports,* $1,015,000,000 (chief imports from the free world, 1962: pharmaceuticals, $14,548,000; jute fabrics and bags, $8,373,000; rice, $7,118,000). *Chief trading partners* (1963): USSR (took 30% of exports, supplied 53% of imports); Communist China (took 13% of exports, supplied 10% of imports); Czechoslovakia (took 6% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 8,300 miles; *motor vehicles* (1963), 131,500 (automobiles, 91,000); *railways* (1963), 3,562 miles; *merchant vessels* (1964), 34 (144,000 gross registered tons); *state airline,* Cubana; *principal airport,* Havana.
Communications: *Telephones* (1964): 223,745; *television stations* (1964), 27; *television sets* (1964), 500,000; *radios* (1961), 1,300,000; *newspapers* (1961), 10 (daily circulation, 611,000).

against imperialism headed by the United States." However, on Jan. 2, 1966, Castro announced that China had broken its rice-for-sugar agreement.

Castro received a delegation of South Vietnamese Vietcong rebels early in 1965, and during the year he repeatedly offered to send troops to fight with the Vietcong against the South Vietnamese government and the United States. He also donated 1.5 million tons of used clothing and 10,000 tons of sugar to North Vietnam and sent a Cuban ballet troupe to entertain there.

On April 8 the Cuban government announced the arrest of 53 members of an "espionage ring," including two American Baptist ministers. The Americans were later tried, convicted, and sentenced to prison terms of 6 and 10 years, respectively. On April 19, Castro accused the United States of instigating counterrevolution, smuggling "huge quantities of arms," and staging raids from "bases in Miami and Central America." The government arrested 31 Cuban counterrevolutionaries on May 12, some of whom were accused of spying for the U.S. Central Intelligence Agency (CIA).

On October 15, Foreign Minister Raúl Roa, in an address to the UN General Assembly, called upon Latin Americans, Asians, and Africans to rise in opposition to the "Yankee imperialists." He invited representatives of the three groups to meet in Havana in January 1966, to plan joint action against United States policies. The speech was so violent that the U.S. delegation, for the first time, left the assembly hall while Roa was speaking.

Cuban Subversion. Relations with the United States were not likely to improve so long as Cuba continued to operate as a Communist base for organizing, training, financing, and launching "wars of national liberation" in the Western Hemisphere. On April 18, 1965, Premier Castro stated: "Our greatest wish is not only revolutions in Latin America but in other areas as well." The following day he predicted victory for the guerrilla forces in Colombia, Venezuela, and Guatemala. The U.S. undersecretary of state, Thomas C. Mann, declared on October 12 that Communist subversion in the Western Hemisphere was perhaps more dangerous than ever. He said specifically that "a Communist state" (Cuba) had intervened in the Dominican Republic by "training, directing, financing, and organizing indigenous Communist elements to take control of the government . . . by force and violence."

In 1965, Cuba broadcast an average of 155 hours per week of Communist propaganda to Latin Amer-

WIDE WORLD

CUBANS who fled to the U.S. included Luis Cases (*left*), former provincial governor, and three men (*below*) holding the American flag. Two crewmen show displeasure by displaying the Cuban flag.

UPI

WIDE WORLD

UPI

ERNESTO (CHÉ) GUEVARA *(above, at left)*, Cuba's minister of industry who disappeared later in 1965, meets with Communist China's President Liu Shao-chi in Peking in February. *(Right)* Soviet Foreign Minister Gromyko meets with Cuba's Premier Castro in Havana in October.

ica. At least 30 terrorist and guerrilla warfare schools or camps in Cuba were engaged in preparing Latin Americans for "wars of national liberation."

On January 18 the Soviet news agency, Tass, reported that Communist party delegates from 22 Western Hemisphere countries had met in Havana in November-December 1964 to work for greater unity in the Communist movement. The Tass communiqué stated that Communist revolutionaries in Venezuela, Colombia, Guatemala, Honduras, Paraguay, and Haiti would receive active aid in their effort to seize power by force.

Cuba is primarily a Soviet military base, but it is valued by all the Sino-Soviet powers for use in fomenting subversion in Latin America. In late August, Rear Adm. John D. Bulkeley, commander of the U.S. naval base at Guantanamo, said: "The Communist bloc operates 84 ships daily to supply Cuba. It's costing them $1.5 million a day." United States intelligence sources estimate that there are only about 2,000 to 3,000 Soviet military personnel in Cuba, and the State Department has reported that Castro now has operational control over the 24 SAM sites and 500 missiles. The House Subcommittee on Inter-American Affairs found no evidence to support rumors of additional "missiles in caves . . . or movement in by below-deck shipment on vessels."

Political Developments. Premier Castro has declared that Cuba will have a Socialist constitution by 1969. In the meantime, he heads a dictatorship of the Communist party. On Oct. 1, 1965, the ruling United Party of the Socialist Revolution (PURS) was renamed the Communist party, and a new 100-member Central Committee, headed by an 8-man Politburo (including Fidel Castro and his brother, Raúl) was set up as its governing body.

The Cuban population is controlled mainly through an elaborate spy network known as the Committee for the Defense of the Revolution (CDR). As many as one out of four Cubans spy on their neighbors for the committee. According to their reports, citizens are categorized as "revolutionary" (progovernment) or "gusano" (antigovernment). In periods of crisis, the armed forces round up all the "gusanos" (worms). Early in 1965 it was estimated that 75,000 political prisoners were incarcerated in the country's 56 prisons and jails, 23 concentration camps, and 9 rehabilitation farms. Thousands of Cubans have been executed for offenses against the state.

Although the dictatorship remained in firm control in 1965, there was evidence of tension within the regime. The principal sources of discord were (1) the struggle for power between old-guard Communists and younger supporters of Castro, and (2) Cuba's stand in regard to the Sino-Soviet split.

Premier Castro fired a number of leading officials in 1964 and 1965. Most were old-guard Communists, such as Joaquín Ordoquí, who had been removed in 1964 from the directorate of PURS because of his "unclear political conduct," and Carlos Rafael Rodríguez, who was dismissed from his post as head of the National Institute of Agrarian Reform on Feb. 15, 1965. However, the ousted minister of labor, Augusto Martínez Sánchez had fought with Castro in the 1959 revolution.

By April 1965 the official coolness in Cuban-Soviet relations was replaced by warmth and cordiality. Premier Castro apparently realized that only the Soviet Union could supply the economic and military aid essential for Cuba's existence. At about this time, Minister of Industries Ernesto "Ché" Guevara, one of the chief architects of the Cuban revolution, dropped out of public view after completing a three-month trip to African and Asian countries. Experts and scholars speculated that the disappearance of Guevara was evidence of Cuba's pro-Soviet position. Guevara had openly criticized Soviet socialism and certain Soviet policies while expressing a pro-Peking line. On October 3, Castro announced that Guevara had resigned from the PURS and had left Cuba "for new fields of battle."

Economy. Good weather and the efforts of thousands of "volunteers" (including Premier Castro and members of his cabinet) resulted in a harvest of about 6 million tons of raw sugar in 1965, by far the best output since Castro seized power in January 1959. However, Castro is bound by trade agreements to barter a large part of his sugar to the Soviet Union and Communist China, so the bumper crop may not raise export earnings significantly. In neither 1964 nor 1965 did Cuba earn enough foreign exchange to pay for imports.

The inferiority of Soviet, Czech, and Chinese manufactured goods created a great demand for Western products. The Cuban government gave priority in 1965 to importing critical spare parts, transportation equipment, pharmaceuticals and veterinary supplies, breeding stock for cattle and poultry farms, books, and films.

Because Cuba is greatly in debt to the Communist countries, the Soviet Union has insisted that all industrial projects not related to sugar be shelved. Many factories remain inoperative, and consumer shortages in 1965 included shoes, clothing, meat, and milk. Castro admitted that there would still be a shortage of 2 million houses in 1990. Economic studies indicate that socialism in Cuba from 1959 to 1965 resulted in a decline of 20–25% in gross national product and standard of living.

Education. Because so many of the hundreds of thousands of Cubans who have managed to escape from their homeland have come from the educated classes, Castro has made a strong effort to educate people to replace them. About 100,000 students were being trained for the new technical and managerial class in 1965. In an effort to elevate every person to at least the 6th grade level, "Workers-Peasants Improvement Forces" were created with 600,000 enrollees claimed for 1965.

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CURLING. See Sports.
CYCLING. See Sports.

CYPRUS

Fighting between Greeks and Turks in Cyprus was sporadic during 1965. An uneasy truce prevailed on the troubled island, thanks to the presence of the United Nations Forces in Cyprus (UNFICYP). But there was little progress toward a political settlement. UNFICYP'S success in maintaining the peace, and the inability of the parties concerned to achieve a political solution, have led to the extension of UNFICYP's mandate. The mandate calls on UNFICYP "to use its best efforts to prevent a recurrence of the fighting and, as necessary, to contribute to the maintenance and restoration of law and order and a return to normal conditions." By late 1965, the mandate had been extended five times since it was first introduced in March 1964.

Origins of the Conflict. At the core of the dispute lies the insistence of the Turkish Cypriotes on the immediate implementation of their special rights as outlined by the constitution, which came into effect when the island gained independence from Britain on Aug. 16, 1960; and the determination of the Greek Cypriotes to alter these provisions of the constitution. In the opinion of the Greek Cypriotes, the constitution gave disproportionate rights to the Turkish minority and provided such a rigid and complicated system of checks and balances that the normal political and constitutional growth of the island was permanently arrested. The Turks of Cyprus, representing 18% of the population, held, through the Turkish Cypriote vice president, veto powers on foreign affairs, defense, security, and some financial matters. The constitution called for a permanently fixed ratio of seven Greeks to three Turks in the House of Representatives.

The veto power was invoked frequently by the Turkish Cypriotes in order to force the Greek Cypriotes to implement fully the provisions of the constitution providing for an autonomous Turkish community in Cyprus. The Greek Cypriotes complained that the operations of the government were being paralyzed by the excessive use of the veto power, and on Nov. 30, 1963, President Makarios submitted to the Turkish Cypriotes his proposals for constitutional reform. They included the elimination of the Turkish veto power in noncultural affairs and the reorganization of the security forces and the public service according to the size of the population of the two communities. His proposals also called for the protection of the cultural rights of the Turkish Cypriotes.

On Dec. 16, 1963, the government of Turkey rejected the plan on behalf of the Turkish community and, five days later, clashes began on Cyprus that culminated in full-scale civil strife.

The Mediator's Report. The mediation efforts of the United Nations have proved less successful than efforts to bring an end to the fighting on Cyprus. In March 1965 the much awaited report of the UN mediator for Cyprus, Galo Plaza Lasso of Ecuador, was made public. The mediator stated that it was difficult for him to see how any proposed settlement of the Cyprus problem could succeed if it left open the possibility of *enosis* (union of the island with Greece) against the wishes of the Turkish-Cypriote community. The mediator also found that the practical objections to the geographic separation of the two communities (*taksim*) were almost insuperable. He noted that the Turkish Cypriote community's

CYPRUS · Information Highlights

EUROPE
ASIA
KASHMIR
AFRICA
INDIA

Area: 3,572 square miles.
Population: 594,000 (July 1, 1965 est.).
Chief City (1963 est.): Nicosia, the capital, 47,000.
Government: *President*—Archbishop Makarios; Vice President—Dr. Fazil Kutchuk; *Parliament*—House of Representatives (50 members).
Religious Faiths: Greek Orthodox, 78% of population; Muslims, 18%; Roman Catholics, 1%.
Education: *Literacy rate* (1960)—76% of population aged 15 and over. *Total school enrollment* (1963–64)—123,000 (primary, 86,000; secondary, 37,000).
Finance (1965 est.): *Revenues,* $42,285,195; *expenditures,* $43,066,232; *public debt* (1963), $39,397,061; *monetary unit,* pound (0.3571 pound equals U.S.$1 at official rate).
Gross National Product (1963): $364,560,000.
National Income (1963): $321,440,000; average annual income per person, $546.
Economic Indexes (1964): *Industrial (mining) production,* 52 (1958=100); *cost of living,* 104 (1958=100).
Manufacturing (metric tons): Cement (1964), 80,000; wine (1962), 14,000; meat (1963), 9,000; olive oil (1960), 4,000.
Crops (metric tons): Citrus fruits (1964), 68,000; grapes (1962), 64,000; figs (1963), 2,500; dry beans (1962), 2,000; lentils (1962), 1,000.
Minerals (metric tons, 1964): Pyrites, 672,600; gypsum, 100,000; copper, 16,796 (exported); asbestos, 11,827; salt (1963), 7,300; chromite (1963), 5,117.
Foreign Trade (1964): *Exports,* $58,000,000 (chief exports, 1963: cupreous concentrates, $10,965,000; potatoes, $6,238,000; iron pyrites, $5,499,000; citrus fruits, $5,446,000); *imports,* $109,000,000 (chief imports, 1963: nonelectric machinery, $12,939,000; petroleum products, $10,433,000; automobiles, $6,440,000). *Chief trading partners* (1963): Great Britain (took 40% of exports, supplied 33% of imports); West Germany (took 18% of exports, supplied 8% of imports); Italy (took 8% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 3,873 miles (1,476 paved); *motor vehicles* (1964), 47,800 (automobiles, 35,400); *merchant vessels* (1964), 5 (32,000 gross registered tons); *national airline,* Cyprus Airways; *principal airport,* Nicosia.
Communications: *Telephones* (1964): 24,820; *television stations* (1964), 1; *television sets* (1964), 7,000; *radios* (1963), 110,000; *newspapers* (1963), 9 (daily circulation, 106,000).

KEYSTONE PRESS

CYPRUS gradually returned to peace in 1965 under watchful eye of British troops stationed on island, who helped to enforce the cease-fire that ended fighting between the Greek and Turkish communities.

constitutional rights were more extensive than any they might hope to secure in a future settlement.

The Turkish Cypriotes and the Turkish government accused Plaza of exceeding his duties and declared that he could not continue as mediator. The Greek Cypriotes and the Greek government approved the report with certain reservations and asked that the mediator's efforts be continued. The secretary general of the United Nations, U Thant, declared on April 2 that the mediator had not exceeded his authority.

Ankara and Moscow. In its efforts to block *enosis*, Turkey turned to the Soviet Union for support. Moscow was pleased to capitalize on the growing anti-American feeling in Turkey that had resulted from the neutral stand of the United States on the Cyprus issue. Turkey and the Soviet Union signed commercial agreements in February. Later, Moscow declared that a solution to the Cyprus problem should be based on respect for the independence and territorial integrity of Cyprus, and should recognize the existence of two national communities on the island.

The subtle shift in Soviet policy has strengthened Turkey's bargaining position, although the Soviet Union, in fact, determined to play it both ways with the Greeks and Turks. In the last resort, the Russians are bound to support the side that opposes both *enosis* and *taksim*. The union of the island with Greece or its partition between Greece and Turkey would drive underground the Communist party of Cyprus (AKEL).

The Two Cypriote Communities. The failure to agree on a compromise solution of the Cyprus problem reflects the irreconcilable positions of the two sides. The Greek Cypriotes, representing 80% of the population, insist on unfettered independence, a unitary state, and majority rule. They have indicated a willingness, however, to discuss with anyone an arrangement for the protection of minority human rights. On the other hand, the Turkish Cypriote leadership feels that at least one third of the island should be cleared of Greek Cypriotes and settled with a Turkish Cypriote majority, and that the two communities would then co-administer the island.

While both communities have been working to bolster their positions on the island, the Greek Cypriotes have had the edge. Their military forces are superior to those of the Turkish Cypriotes and they are in control of all the ports and of 98% of the island's territory.

The Greek Cypriotes are abolishing the separatist features of the 1960 constitution piecemeal. On July 23 the Greek members of the House of Representatives enacted two laws: one amending the electoral laws, and another extending the terms of office of President Makarios and the Greek members of the House until Aug. 16, 1966. The new electoral law places the Greeks and Turks on a common footing and abolishes all the special provisions governing Turkish representation in the House of Representatives.

In August, Turkey denounced these innovations before the UN Security Council as a "flagrant violation of solemn international agreement. . . ." The Security Council unanimously reaffirmed its resolution of March 4, 1964, and called upon all parties "to avoid any action which is likely to worsen the situation."

On October 14, President Makarios presented his plan for Cyprus to the United Nations. It calls for a code of fundamental rights and freedom, and the presence in Cyprus of a UN commissioner and staff to ensure observance of the code's terms. It also provides cultural, educational, and religious autonomy for all minority communities, and membership in Parliament on the basis of proportional representation.

At the end of 1965 it appeared that no settlement is likely to be forthcoming without agreement between the Turkish government and the government of Archbishop Makarios.

Economy. The political disturbances in 1964 greatly hindered economic growth and initially caused a serious production loss in all sectors. But by the end of 1964 and well into 1965 the economy moved forward and in some cases surpassed the 1963 levels. The reasons for the improvements in the economy were various: the population's increasing confidence in the economic future of the country led to a growth in investment activity; the country enjoyed a good harvest; and the expenditures by the approximately 7,000 UNFICYP personnel helped to make up for the loss of tourist revenue.

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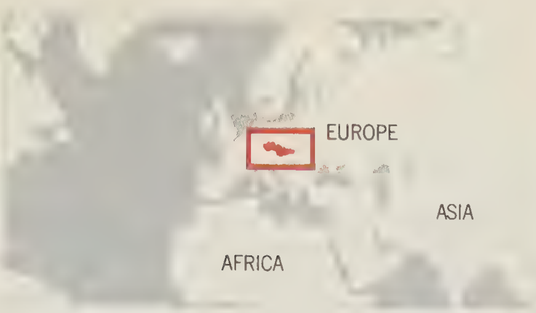
CZECHOSLOVAKIA

The Communist leaders of Czechoslovakia, who were extremely slow to abandon Stalinist methods, finally took steps in 1965 to repudiate those attitudes and policies that had brought the country to the threshhold of economic and intellectual stagnation. Czechoslovakia was once considered the most highly industrialized country in eastern Europe, but in 1963 it registered a sharp drop in its industrial output. As a result, Antonín Novotný, Communist party leader since 1953 and president of the republic since 1957, was forced to abandon the old policies and to approve the introduction of the new methods.

CZECHOSLOVAKIA · Information Highlights



Area: 49,370 square miles.
Population: 14,107,000 (Dec. 31, 1964 est.).
Chief Cities (1963 est.): Prague, the capital, 1,010,658 Brno, 321,491; Bratislava, 255,684; Ostrava, 248,416.
Government: *President*—Antonín Novotný (elected by the National Assembly, 1957); *Premier*—Jozef Lenárt (appointed 1963). *Parliament*—National Assembly, 300 members.
Religious Faiths: Roman Catholics, 64% of population; others, 36%.
Education: *Total school enrollment* (1962)—2,762,421 (primary, 2,272,790; secondary, 77,196; teacher-training, 8,575; technical, 276,262; higher, 127,598).
Finance (1964 est.): *Revenues,* $18,113,000,000; *expenditures,* $18,100,000,000; *monetary unit,* koruna (7.20 korunas equal U.S.$1).
Net Material Product (1964): $23,500,000,000.
Economic Indexes (1964): *Industrial production,* 148 (1958=100); *cost of living,* 98 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 8,377,000; cement, 5,493,000; wheat flour, 1,100,000; sugar, 1,091,000; fuel briquets and packaged fuel, 798,000; meat (1963), 775,000; gasoline (1963), 505,000.
Crops (metric tons, 1964): Sugar beets, 7,200,000 (ranks 7th among world producers); potatoes (1963), 6,506,000 (rank, 8th); barley (1963), 1,620,000 (rank, 11th); rye, 750,000 (rank, 6th); oats, 665,000 (rank, 14th); wheat, 1,739,000; maize, 381,000; rapeseed, 46,000.
Minerals (metric tons, 1964): Coal, 103,806,000 (ranks 8th among world producers); gypsum, 351,000 (rank, 19th); silver, 1,608,000 troy ounces (rank, 18th); iron ore, 2,846,000; lime, 2,347,000; pyrites, 361,000.
Foreign Trade (1964): *Exports,* $2,576,000,000 (chief exports, 1962: machinery and equipment, $1,044,000,000; fuels, minerals, metals, $425,000,000; consumer goods, $423,000,000; organic raw materials, $142,000,000); *imports,* $2,429,000,000 (chief imports, 1962: fuels, minerals, metals, $627,000,000; machinery and equipment, $542,000,000; organic raw materials, $430,000,000). *Chief trading partners* (1963): USSR (took 39% of exports, supplied 39% of imports); East Germany (took 9% of exports, supplied 11% of imports); Poland (took 8% of exports, supplied 7% of imports).
Transportation: *Motor vehicles* (1963) 336,300 (automobiles, 220,000); *railways* (1963), 8,169 miles; *merchant vessels* (1964), 12 (93,000 gross registered tons); *national airline,* Czechoslovak Airlines; *principal airports,* Bratislava, Brno, Kosice, Olomouc, Prague.
Communications: *Telephones* (1964), 1,298,766; *television stations* (1964), 18; *television sets* (1964), 1,700,000; *radios* (1963), 3,684,000; *newspapers* (1963), 25 (daily circulation, 3,800,000).

Economic Reforms. The proposed changes reduced central planning and gave factory managers the responsibility for operating their enterprises at a profit. These reforms, called the New Economic Model, were announced on Oct. 17, 1964, and were to be implemented in 1965. The proposed reforms affected almost all aspects of Czechoslovak life.

Government. A reorganization of the government was announced on Nov. 11, 1965. Several ministries were consolidated and new ones were created. The objective of these changes was to free top government officials from an excessive concern with details to allow them to concentrate on broader objectives. The organizational changes were accompanied by changes in personnel. It was generally thought that the purpose of the personnel shifts was to place successful administrators rather than party functionaries in key ministerial positions.

Communist Party. The Communist party has been mobilized to create the proper climate for the widest possible acceptance of the New Economic Model. An intensive propaganda campaign explained the need for change by stressing the desperate position of the Czechoslovak economy. The campaign also warned that the changes would not lessen the influence of the Communist party in leading Czechoslovakia to its goal of a Socialist society.

The 13th Congress of the Czechoslovak Communist party was scheduled to meet on May 31, 1966. Party machinery was set in motion to select delegates and prepare reports to be considered by the congress. On December 22 the Central Committee published a document, which is to serve as a guideline for the congress, condemning the former system of centralized planning in the strongest language ever used.

Education. Eugen Loebl, an economist who is one of the most outspoken advocates of reform and who barely survived the purges of the early 1950's, stated in a number of articles that the successful operation of the New Economic Model depended on the selection of managers on the basis of intellectual ability. This meant replacing those managers chosen primarily for their party loyalty. The search for brainpower had repercussions in the educational system.

Considerable criticism had been expressed that the policy of equalizing wages had in the past destroyed students' incentive to continue with professional education. It was expected that the New Economic Model, by rewarding professional talent, would encourage students to obtain the maximum available education. In July the government decided to establish the Institute of Management. Educational reforms also stressed intellectual qualifications for secondary school entrance.

Cultural Affairs. The emphasis on intellectual attainment encouraged some writers to assert greater independence. In September, 50 young writers organized themselves in opposition to the official Czechoslovak Writers Union. Eduard Goldstücker, a survivor of the 1950 purges, led in the rehabilitation of Karel Čapek, Czechoslovakia's best-known author of the 1920's and 1930's.

The greater degree of freedom manifested itself also in the greater number of Czechoslovaks who were permitted to travel to non-Communist countries. The main obstacle to travel in the West was no longer political restriction, but a shortage of hard currency. Czechs who had emigrated to other countries were urged to visit their homeland.

Foreign Relations. Following a visit by Czech leaders to Moscow in September, a long-term trade agreement was signed with the USSR on Oct. 5, 1965. Soviet party chief Leonid Brezhnev then spent three days in Prague later in October to underline still further Czechoslovakia's close ties with Moscow.

Economy. Gross industrial production rose 4.1% in 1964 over the unsatisfactory performance of the previous year. During the first half of 1965 industrial production rose another 8.7%. Nominal wages and salaries rose 5.1%, while real income climbed 3.8%.

The nation's performance in agriculture continued to be disappointing. An encouraging start of the crop year was negated by one of the worst floods in the history of the Danube River. Crops were ruined in many areas of Slovakia.

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DAHOMEY

ASIA
S. AMERICA

Gen. Christophe Soglo led a bloodless coup in Dahomey on Nov. 29, 1965, that deposed President Sourou Migan Apithy and Vice President-Premier Justin Ahomadegbe. General Soglo appointed Tahiro Congacou, president of the National Assembly, to head a provisional government. The coup followed a power struggle between Apithy and Ahomadegbe over who should appoint a new president of the Supreme Court. On December 22, General Soglo replaced Congacou with himself as head of state because of "the incapacity of the politicians to govern." He suspended the constitution, banned political parties, and dissolved the municipal councils.

Economy. Dahomey's economy was in a critical state in 1965. On June 21, Ahomadegbe, then premier, announced that efforts would be doubled to attract foreign investments to Dahomey. At the same time, government salaries were cut 25% in an attempt to ease the budgetary crisis. It was hoped that the opening of the $28 million port of Cotonou early in the year and the completion of a $3 million palm kernel oil mill outside of Cotonou on February 20 would help the country's economy.

Foreign Affairs. The Chinese Nationalist aid mission withdrew from Dahomey on April 10, and the first Chinese Communist ambassador to Dahomey was accredited on June 19. The Chinese Communists were active throughout the year in the political and cultural fields, concentrating primarily on labor organizations, the press, and youth groups. Although no formal agreements were signed regarding trade and aid, Dahomey and China entered into discussions on both subjects. On March 10, Dahomey and the Soviet Union signed a "plan for cooperative measures."

PETER KOLAR
Office of Central African Affairs
U.S. Agency for International Development

DAHOMEY · Information Highlights

Area: 43,483 square miles.
Population: 2,300,000 (July 1, 1964 est.).
Chief Cities: Porto-Novo, the capital (1964 est.), 69,500; Cotonou (1964 municipal census), 109,328.
Government: *Chief of State*—Gen. Christophe Soglo (assumed power Dec. 22, 1965). *Parliament*—National Assembly, 42 members, all belonging to the Parti Démocratique Dahoméen.
Religious Faiths: Tribal religions, 68% of population; Muslims, 15%; Roman Catholics, 12%; others, 5%.
Education: *Total school enrollment* (1963–64)—120,050 (primary, 113,600; secondary, 5,400; technical, 1,050).
Finance (1964): *Revenues*, $28,900,000; *expenditures*, $28,900,000; *monetary unit*, CFA franc (246.85 CFA francs equal U.S.$1).
Manufacturing: Lumber (1963), 4,000 cubic meters.
Crops (metric tons, 1963–64 crop year): Cassava, 1,226,000 (ranks 6th among world producers); sweet potatoes and yams, 534,000 (world rank, 10th); palm kernels, 49,300 (world rank, 5th); maize, 206,000; peanuts, 31,000; dry beans, 22,000; cottonseed, 11,000.
Foreign Trade (1964): *Exports*, $13,200,000 (chief exports: palm kernels, $7,100,000; palm oil, $2,700,000); *imports*, $31,400,000 (chief imports, 1963: cotton fabrics, $4,800,000; motor vehicles, $2,500,000; iron and steel, $2,100,000). *Chief trading partners* (1963): France (took 72% of exports, supplied 62% of imports); Netherlands (took 12% of exports, supplied 1% of imports); Senegal (took 2% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 3,828 miles (369 paved); *motor vehicles* (1964), 8,000 (automobiles, 3,500); *railways* (1963), 360 miles; *principal airport*, Cotonou.
Communications: *Telephones* (1964), 3,129; *radios* (1962), 35,000; *newspapers* (1962), 2 (daily circulation, 3,000).

DAIRY PRODUCTS

Dairy farmers in the United States produced about 125,463,000,000 pounds of milk in 1965, according to preliminary estimates of the U.S. Department of Agriculture. This was about 1% below the record output of 126,598,000,000 pounds which was achieved in 1964.

The output per cow, which has been gaining annually ever since World War II, continued to increase in 1965. The average was estimated at 8,037 pounds, or 2% above the previous high of 7,880 pounds in 1964, and amounting to more than 50% above the 5,314 pounds of 1955. The 1965 increase per cow of 157 pounds was sharply below the 1964 gain of 319 pounds and the 1955–64 average annual increase at about 285 pounds.

The downward trend in the number of milk cows on farms, beginning in 1945, continued in 1965, when the number of cows averaged about 15.5 million, or 3.6% below 1964. The milk cow population has declined 36% during the past 10 years, even though the amount of milk produced has increased.

MILK PRODUCTION IN PRINCIPAL COUNTRIES
(In millions of pounds)

Country	Average 1956–60	1964	Preliminary 1965
Argentina	10,187	10,617	10,215
Australia	14,005	16,000	14,825
Austria	6,048	6,895	7,055
Belgium	8,320	8,903	9,350
Brazil	10,170	12,435	13,960
Canada	17,407	18,491	18,345
Czechoslovakia	8,245	8,047	8,380
Denmark	11,633	11,535	11,765
Finland	7,118	8,435	8,600
France	46,037	55,615	56,750
Germany, East	11,737	11,603	12,125
Germany, West	39,604	45,922	46,740
Great Britain	26,463	28,462	29,635
Ireland	5,973	6,614	7,055
Italy	19,580	19,068	19,455
Japan	3,380	6,698	7,040
Mexico	5,078	8,150	8,605
Netherlands	13,833	15,335	16,100
New Zealand	11,522	12,603	13,135
Poland	25,574	27,703	27,880
Rumania	4,474	5,666	5,335
Sweden	8,657	8,009	8,115
Switzerland	6,451	6,645	7,145
USSR	111,609	119,048	127,870
United States	123,500	126,598	125,463

Although milk production in the United States in 1965 decreased about 1,135,000,000 pounds from 1964, farm sales dropped only about 463,000,000 pounds because less milk was consumed on the farms where it was produced. Use of milk in commercial markets increased about 1,700,000,000 pounds. As a result, the Commodity Credit Corporation's purchases for price support were expected to be about 1,250,000,000 pounds less than the 7,700,000,000 pounds bought in 1964, and sharply below the 1962 record purchase of 10,750,000,000 pounds.

Dairy products in commercial and government stocks had dropped about 11% by the end of 1965, to approximately 4,700,000,000 pounds. This total compares with 5,294,000,000 pounds on hand at the end of the previous year, and with 8,488,800,000 pounds as the year-end average for 1960–64.

Civilian use of milk in 1965 was estimated to be about 39,000,000 pounds below the 118,855,000,000 pounds (milk equivalent) consumed in 1964. Use of milk per capita in all forms fell 9 pounds, to 619 pounds. Consumption per person has declined each year since 1955.

World Production. According to preliminary estimates, milk production in 36 countries that normally produce about 85% of the world's supply increased about 2% during 1965. Output in these countries was estimated at 647,423,000,000 pounds, compared with 631,805,000,000 pounds in 1964. The 1965 output was 11% above the 1956–60 average of 580,770,000,000 pounds.

Milk production increased about 3% in western Europe, the area with the highest production. Eastern European production rose about 5% over that of 1964, while South American output increased about 4%. Output in the Western Hemisphere as a whole was down about 1%.

Ray Reiman
President, Farm Business, Inc.

DALLAS

The second largest city in Texas, Dallas (1965 est. pop., 807,800) began a major construction project in its downtown area in 1965 and agreed to build a joint airport with Ft. Worth. Also, the long-sought canal to connect the city with the Gulf of Mexico won federal approval, and the Dallas public schools adopted a new school integration plan.

New Construction. In 1965, construction began on Main Place, a multi-million-dollar, ten-acre building complex for the Dallas central business district. The first major unit of the privately endowed 1,266-acre Graduate Research Center of the Southwest was dedicated by Gov. John Connally. The $40,000,000 Dallas County Junior College System, with four campuses planned, was approved by popular vote.

New Transportation Facilities. Dallas and Ft. Worth, following a Civil Aeronautics Board order, ended a 20-year controversy on Sept. 25, 1965, by agreeing to construct a joint regional airport on a 21,000-acre site to be chosen by a neutral professional firm.

The long-sought Trinity River Project, a $911,000,000 barge canal, to connect Dallas with the Gulf of Mexico, was included in the Rivers and Harbors Bill enacted by the U.S. House of Representatives on Sept. 22, 1965.

School Integration. On July 2, 1965, the U.S. circuit court of appeals ruled that the stair-step, grade-a-year integration plan in effect in Dallas public schools since 1962 did not meet legal requirements. The Dallas School Board then adopted a plan to integrate elementary grades in 1965, junior high grades in 1966, and senior high grades in 1967. After the plan was approved by the federal district court, Dallas Negro parents appealed to the circuit court in New Orleans, which ordered immediate integration of the 12th grade. The rest of the plan remained unchanged, however.

Ruby Appeal. Efforts to free Jack Ruby, the condemned slayer of Lee Harvey Oswald (who assassinated President Kennedy in Dallas, Nov. 22, 1963), on the grounds that the judge who sentenced Ruby was not qualified, were denied. After its ruling, the district court sent the record of Ruby's trial to the state court of criminal appeals for review.

Economy. Dallas, the seat of Dallas County, is the economic center of a four-county standard metropolitan area of 3,653 square miles (1965 est. pop., 1,336,200). The city leads the South in wholesale trade, and is a major insurance and finance center and a prominent international spot cotton market. The city's industries include aircraft factories, automobile assemblies and electronics and oil-well equipment plants. Manufacturing accounts for about one fourth of employment in the Dallas metropolitan area, which totaled 524,700 as of Oct. 1, 1965.

City Government and Finance. Dallas has a council-mayor form of government. The mayor is Erik Jonsson, and the city manager is Elgin Crull. Finances for the 1965–66 fiscal year included: city budget, $92,877,443; school budget, $60,612,967; net debt: city, $215,234,000, and schools, $93,971,100; assessed valuation for tax purposes, $2,970,701,574; tax rates: city, $1.70 per $100 assessed valuation, and schools, $1.30.

Arthur A. Smith
Economist and Senior Vice President
First National Bank, Dallas

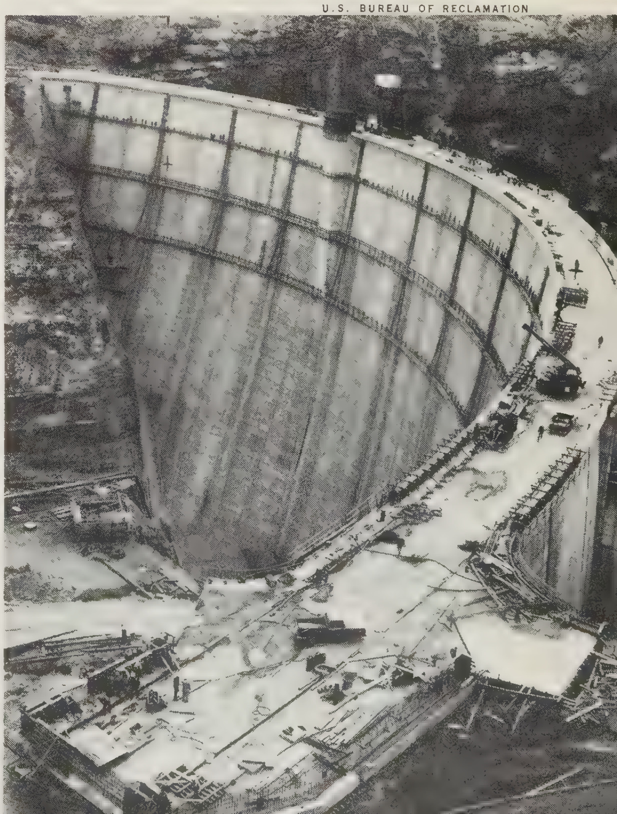
DAMS

Serious and prolonged drought over large areas of the United States and a total power blackout that affected an estimated 30 million Americans for up to 12 hours spurred interest in dam construction during 1965. The need for more reservoirs to save as much surface water as possible was obvious. Less obvious, but nevertheless a fact, was the importance of having hydroelectric power plants that can be put back into service easily—unlike steam power plants—after an equipment failure somewhere else on the line shuts down generators.

Oroville Dam. In effect, contractors are building a mountain on the Oroville Dam project on the Feather River north of Sacramento, Calif. Using a wheel excavator to load up to 3,000 cubic yards per hour onto conveyor belts—a rate that enables

YELLOWTAIL DAM across Montana's Bighorn River Canyon was topped out in 1965 as crews finished pouring concrete.

U.S. BUREAU OF RECLAMATION



it to fill 42-car railroad trains in 14 minutes—the contractor is piling up earth at top speed for a 770-foot "mountain"—the world's highest earthfill. The contractor expects to have the dam well above 500 feet by the end of 1966, and to complete it in 1967.

San Luis Dam. Also in California, the big San Luis earthfill dam was another study in pushbutton earthmoving. Although not a record-setter in height, San Luis Dam has a volume of 78 million cubic yards, which makes it rank fourth in size in the world. A big wheel excavator also loads fill for this embankment, but, instead of a railroad, the contractor uses 100-ton bottom-dump wagons to haul the earth. San Luis is part of a $511 million joint federal-state project tied into California's ambitious State Water Project. (See also WATER SUPPLY.)

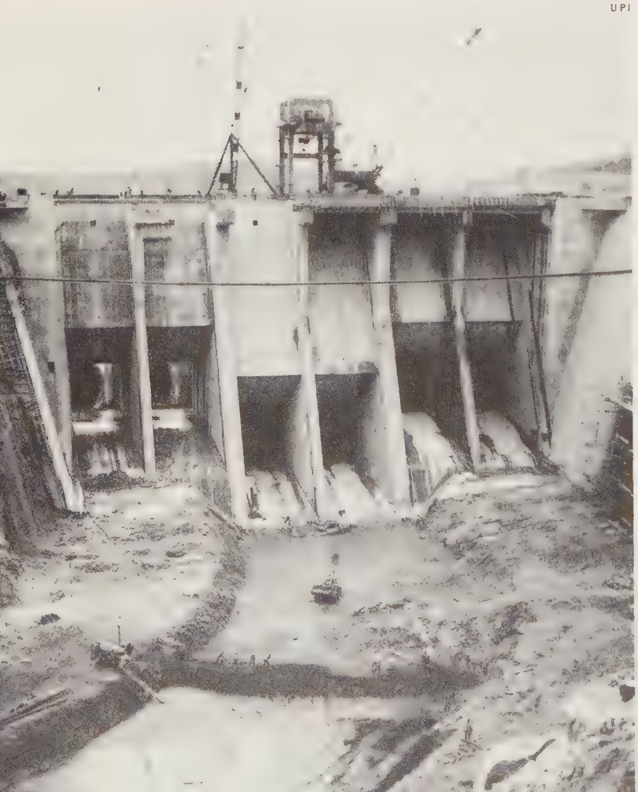
Yellowtail Dam. The 525-foot-high concrete-arch Yellowtail Dam on the Bighorn River in Montana was topped out during 1965 and first power was to be produced in the spring of 1966, according to its builder, the U.S. Bureau of Reclamation.

Mossyrock Dam. Concrete was scheduled to be poured in 1966 as full-scale construction begins on Mossyrock Dam, a high concrete arch on the Cowlitz River in southwestern Washington. In 1965 the contractor completed excavation inside a cofferdam, going 250 feet below the river bed to reach sound foundation rock. The $102 million project will be finished in late 1968.

Boundary Dam. Seattle City Light Company diverted the Pend Oreille River around the site of Boundary Dam, a 400-foot concrete arch, in northeastern Washington. Excavation of the underground powerhouse chamber was also completed. At the end of 1965 the $85 million project was 60% complete.

AKOSOMBO DAM across the Volta River will provide Ghana with abundant electricity for its industrial development.

UPI



WIDE WORLD PHOTOS

SAN LUIS DAM, a key unit of the California Water Project, moved ahead in 1965 with excavation of the foundation.

John Day Lock and Dam. The U.S. Army Corps of Engineers advanced construction to the 61% mark during 1965 on the $448 million, multipurpose John Day Dam on the Columbia River, on the Oregon-Washington border. One of the biggest construction projects now under way in the United States, the John Day Lock and Dam abounds in superlatives. Its 113-foot lift navigation lock is the world's highest single-lift lock. Ultimate powerhouse capacity of 2.7 million kilowatts will exceed that of any single U.S. plant. Its 77-mile-long reservoir has made necessary railroad and highway relocations costing more than the overall cost of many large dam projects.

Hells Canyon Dam. Tunnelers completed a 40-foot-diameter rock tunnel through the steep wall of Idaho's Hells Canyon. The Snake River was diverted through the tunnel during 1965, and excavation was started for the $70 million, 320-foot-high concrete arch. The dam's powerhouse will generate 425,000 kw. for the Idaho Power Co.

Libby Dam. Construction was scheduled to begin in 1966 on a 7-mile tunnel to relocate a main-line railroad that must continue to operate through the construction area for the $352 million, 420-foot-high concrete gravity Libby Dam on the Kootenai River in northwest Montana. Contracts for the dam and other relocation work will be awarded in 1966.

Dworshak Dam. A $3.7 million diversion tunnel was started in 1965 to relocate Idaho's Clearwater River temporarily before the start of work on Dworshak Dam, a 693-foot-high concrete gravity dam. Another contract, estimated at $100 million, will be let in 1966 for the dam itself. The overall project will cost an estimated $210 million.

Wells Dam. The Douglas County (Wash.) Public Utility District is building the $202 million Wells Dam on the Columbia River. Although only 185 feet high, the dam is notable for its design in that it incorporates an 820,000-kw. powerhouse, spillway, fish passage facilities, and a switchyard into a single concrete structure, saving an estimated $15 million.

Canada. The Canadians during 1965 continued to build some of the world's most spectacular dams. In British Columbia, an earthmoving operation comparable to those at the Oroville and San Luis dams continued during 1966 at the Portage Mountain Dam, situated on the Peace River hundreds of miles north of Vancouver. The 600-foot-high, 60-million-cubic-yard rockfill dam is impressive in its own right, but a $77 million underground powerhouse adds to massiveness of the project. The rock cavern will be the world's largest, measuring 690 feet long, 67 feet wide, and 120 feet high. It will house ten 227,000-kw. turbine generators, making this Canada's biggest single hydroelectric plant and among the top ten in the world.

Construction continued on Quebec's huge Manicouagan-Outardes project, deep in the bush country some 500 miles from Montreal. The Quebec Hydroelectric Commission reported that the world's highest multiple-arch dam, Manicouagan 5, is well past the halfway point. The diversion tunnels were closed during 1965 and the dam began impounding 115 million acre-feet of Manicouagan River water. Filling the lake behind the dam will require an estimated eight years, and it will ultimately be the sixth largest man-made lake in the world.

Farther downstream, a hollow buttress dam named Manicouagan 2 first generated power during 1965. Manic 2's power capacity will be 1 million kw.; Manicouagan 5 will have a capacity of 1.3 million kw.

Construction also progressed in 1965 on Duncan and Arrow dams on the upper Columbia River. Both dams, plus a third on Mica Creek, were made possible by the U.S.-Canadian Columbia River Treaty in 1964.

Africa. Akosombo Dam on the Volta River in Ghana generated its first power in 1965 and was dedicated early in 1966. The 370-foot-high rockfill embankment has created the fifth largest reservoir in the world, containing 120 million acre-feet of water and flooding 3,275 square miles. A large block of Akosombo Dam's initial capacity of 512,000 kw. will furnish power for an aluminum smelter due to be completed in 1967.

In the United Arab Republic, the Egyptian-Russian team building the Aswân High Dam across the Nile, 450 miles upstream from Cairo, reached a critical stage in construction late in 1965. The project as a whole was a year ahead of schedule, but construction men still had to handle the essential task of grouting the granular riverbed materials that underlay the 365-foot-high embankment. Grout—a mixture of water, cement, and sometimes clays and silicates—will be pumped into these alluvial deposits as deep as 465 feet below the base of the 2-mile-long embankment. After the 127.3-million acre-foot reservoir is filled, the grouting will prevent the Nile waters from seeping under the dam—a development that would turn the $500-million undertaking into a fiasco.

The Sudan expects to complete its big Roseires Dam on the Blue Nile River during 1966. Although its maximum height is only 223 feet, the concrete and earthfill structure stretches 10 miles across the broad valley. Its powerhouse capacity, when turbines are installed in the future, will be 210,000 kw. The project's primary purpose, however, is to store irrigation water for cotton growers.

Asia. Despite an undeclared war between India and Pakistan in August and September 1965, which raged around the site of Mangla Dam in West Pakistan, construction continued on schedule. The contractor diverted the Jhelum River around the site of the $354 million earth dam and continued placement of the 75 million cubic yards required for the main embankment. During the fighting, a strict blackout made around-the-clock work impossible.

William W. Jacobus, Jr.
Associate Editor, "Engineering News-Record"

MARTHA SWOPE

RUDOLF NUREYEV AND MARGOT FONTEYN danced the title roles in the British Royal Ballet's *Romeo and Juliet.*

DANCE

For the second successive year, financial matters dominated the developments in dance in 1965. For the first time, the federal government gave economic assistance to a ballet company. Aid from private foundations continued to flow to both classic and modern dance groups.

The Robert Joffrey Ballet represented dance in President Lyndon B. Johnson's one-day Festival of the Arts at the White House on June 14, but there was speculation concerning the extent to which the Federal Aid to the Arts Act, signed by the president on September 29, would assist the dance. The act said only that funds would be made available for a national ballet company.

RUDOLF NUREYEV, the most exciting male dancer since Vaslav Nijinsky in the opinion of many ballet enthusiasts, toured the United States in the spring of 1965 with Britain's Royal Ballet. He and the company appeared in New York City during April and May and then gave performances in Detroit, Chicago, Los Angeles, San Francisco, and other cities.

Rudolf Hametovich Nureyev was born on March 17, 1938, on a train passing Irkutsk, USSR. At 17, he entered the Leningrad Ballet School, which trains dancers for the Leningrad Kirov Ballet. He later joined the Kirov company, and by the time the group set out on a tour of France and Britain in 1961, Nureyev had become its leading male dancer.

On June 17, 1961, as the rest of the Kirov troupe was about to leave Paris for London, Nureyev discovered that he was to be sent back to the USSR. He sought and was granted asylum in France. In 1962 he became the first "permanent guest artist" with the Royal Ballet.

Grants and Awards. On November 15, the National Arts Council came to the aid of the American Ballet Theatre with a grant of $100,000 for emergency operating expenses, and an additional $250,000 to assist the company in its nationwide tour. Plans for the tour had been severely curtailed by lack of funds.

Also on the national level, the U.S. Office of Education awarded $195,074 for a dance study project to the University of Pennsylvania. The specific intention of the grant was to allow Nadia Chilkovsky Nahumck, an associate in the education division of the university's museum, to conduct a two-year project aimed at setting up a graded course of study in dance for secondary schools.

The Ford Foundation, which had made an impressive grant to the New York City Ballet in 1964, announced on Nov. 17, 1965, the gift of another $3.2 million to the New York City Ballet and the New York City Opera to help expand their operations at the New York State Theater in Lincoln Center.

More modest but in a way more significant was the Aspen Institute for the Humanistic Studies grant of $30,000. Its purpose is to "honor the individual anywhere in the world judged to have made the greatest contribution to the advancement of the humanities." Martha Graham, the 1965 recipient, promptly announced that she would use the money for new works.

The Rockefeller Foundation allocated a modest $2,000 to three premieres at the 18th Annual American Dance Festival, August 13–15, at Connecticut College, New London, Conn.

Ballet. Public interest in dance was on the upswing in 1965. A two-part television special called *The Best of the Bolshoi*, presented February 21 and March 14 by WABC-TV in New York, drew more local viewers for its first installment than did a popular sports program. Also, *An Evening With the Royal Ballet*, a film consisting of four of the British ballet company's most lavish productions, played to sold-out movie houses across the United States.

The American Ballet Theatre, in its 25th anniversary season, March 16–April 11, at the New York State Theater, also played to packed houses. Although at the time the company was desperately in need of finanical aid (which it later received), it presented six new productions. Five of the new works were by American choreographers—Agnes de Mille (*The Wind in the Mountains* and *The Four Marys*), Jerome Robbins (*Les Noces*), Bentley Stone (*L'Inconnue*), and Glen Tetley (*Sargasso*). The company also danced a stylistically faithful version of the two-act romantic ballet *La Sylphide*, usually associated with the Royal Danish Ballet.

Jerome Robbins' *Les Noces* may prove to be the dance masterpiece of this decade. With music by Igor Stravinsky, the ballet depicts a primitive Russian wedding celebration. It hurls the dancers through patterns of an almost barbaric wildness and rhythmic complexity, then subsides to a final moment of awkward tenderness for the bride and groom, danced by William Glassman and Erin Martin.

The one-year-old Harkness Ballet also premiered works by such American choreographers as Alvin

BERTRAM ROSS AND MARTHA GRAHAM (*below*) made the Old Testament come to life as the Graham company revived one of Miss Graham's early works, *The Witch of Endor.*

MARTHA SWOPE

MARTHA SWOPE

GEORGE BALANCHINE, in a rare stage appearance (*above*), danced with Suzanne Farrell in premiere of his new work, *Don Quixote.*

Ailey, Stuart Hodes, Michael Smuin, Donald Saddler, and Richard Wagner. Several new works were contributed by Harkness Ballet's artistic director George Skibine. The company made its world debut in Europe in the spring. Then, after a summer of study and rehearsal at Watch Hill, R.I., and a brief autumn tour in the United States, it moved officially into its ornate new headquarters in New York City.

Other premieres offered by major ballet companies in 1965 included Lew Christensen's *Life* for the San Francisco Ballet, Joseph Lazzini's *The Miraculous Mandarin* for the Metropolitan Opera Ballet, and George Balanchine's *Don Quixote* for the New York City Ballet. *Life* proved to be a pretentious satire on American customs. *The Miraculous Mandarin,* which handled its macabre theme with flair, was helped by Fern MacLarnon's authoritative performance in the central role. *Don Quixote* revealed Balanchine in a rare and elevating philosophical mood. Although Balanchine himself performed the Knight of the Sad Countenance at the May 27 premiere, the emphasis of the ballet was on Suzanne Farrell, who danced the parts of Dulcinea, the Holy Virgin, and many others.

Foreign companies visiting the United States in 1965 included Britain's Royal Ballet in its spring tour. Despite the company's several grandiose new productions, the greatest excitement was generated by the joint appearances of Margot Fonteyn and Rudolf Nureyev.

The Royal Danish Ballet was in the United States for an autumn tour. Some critics felt that it had deteriorated since its last U.S. tour. While the male dancers—Erik Bruhn, in particular—displayed their accustomed *brio,* the female members of the company, with a few exceptions, seemed too passive. The repertoire, it was felt, lacked daring.

The happiest surprise among foreign imports was Henryk Tomaszewski's Polish Mime Theater, which appeared in New York in January. Although promoted as a theatrical attraction, it proved of intense interest to dance audiences, for its approach was as much choreographic as dramatic.

Modern Dance. For the first time in two years, Martha Graham, the 72-year-old titan of American dance, and her brilliantly trained company were seen on Broadway. In a season lasting from November 2 to November 21, she performed in her new work, *The Witch of Endor,* as well as in several repertory pieces, notably the magnificent *Clytemnestra.* The new work she created for the company alone was the wise and sensuous *Part Real—Part Dream.*

Two of the new works presented at the 1965 American Dance Festival at Connecticut College, José Limón's *My Son, My Enemy* and Paul Draper's *Il Combattimento,* were failures. The third, Lucas Hoving's *Satiana,* enjoyed a modest success.

Broadway Musicals. Broadway dance was dominated by choreographers Lee Theodore, Herbert Ross, and Gillian Lynne. Miss Lynne's contributions to *The Roar of the Greasepaint, the Smell of the Crowd* and *Pickwick* were amiable. Lee Theodore created a murder ballet for *Baker Street* that was almost on a par with Balanchine's *Slaughter on Tenth Avenue.* But her choreography for *Flora, the Red Menace,* unfortunately caught none of the childish intensity of the 1930's. For *On a Clear Day You Can See Forever,* Herbert Ross devised an 18th century English brothel scene that may well survive beyond the play.

Doris Hering
Associate Editor, "Dance" Magazine

DEAFNESS

Increased knowledge of the effects of drugs and new techniques in ear surgery were used to combat deafness more effectively in 1965. On September 23, President Johnson signed a bill that included a $420,000 appropriation to establish a National Technical Institute for the Deaf. The institute, which probably will be established on a university campus, will train deaf persons for various technical occupations.

Loss of Hearing. A hearing loss in infants and children is often due to improper development of the inner ear and auditory nerve. Some deafness in infants results from their mothers' having German measles (rubella) in the first three months of pregnancy. Other cases of hearing loss in infants may be due to drugs ingested by mothers during pregnancy. The prevention of viral infections and a knowledge of potentially harmful drugs will prevent many cases of so-called congenital deafness.

There is a great need for accurate testing methods to assess the type and degree of hearing loss so that maximum use may be made of the residual hearing of children who have inner ear troubles. Newer methods are being perfected so that hearing tests for infants can be accomplished with precision at an early age, before the child is able to signal that he hears the test sounds.

The use of penicillin and many new antibiotic drugs has effectively controlled serious ear infections that often followed nose and throat infections. Acute mastoiditis now occurs only infrequently, usually in patients who do not get adequate early medical treatment. Many patients develop a condition in which fluid collects in the middle ear and causes a painless but persistent loss of hearing. This fluid must be released to restore hearing, in many cases by inserting a small plastic tube through a tiny opening in the ear drum to maintain proper drainage.

Types of Deafness and Treatment. In sensory-neural deafness (nerve deafness), the cochlea of the inner ear, which contains the auditory nerve endings, does not function normally. In conduction deafness, the middle-ear apparatus (ear drum and tiny bones) is abnormal, and sound waves are not properly transmitted to the inner ear.

Some persons have conduction deafness because an overgrowth of bone in the middle and inner ear prevents the proper movement of the stapes, the tiniest ear bone. In treating these patients, ear surgeons have pioneered in the use of an operating microscope. With this microscope they lift the ear drum from its position, view the tiny bones of the middle ear, and correct the fixation of the stapes so that it moves freely again. Alternatively, the stapes is replaced by a plastic prosthesis to restore hearing, often close to a normal level. After the ear drum is replaced in its normal position, it heals very well.

The same operative approach can be used to repair ear-drum perforations or to correct ear-bone abnormalities that may prevent proper conduction of sounds to the cochlea. Surgical treatment of deafness is progressing so rapidly that many operative procedures have been modified several times. All deafness cannot be cured, but almost all deaf patients can be helped.

Burton J. Soboroff, M.D.
Professor of Otolaryngology
University of Illinois College of Medicine

DEATH RATES, U.S.

In 1964 there were 1.8 million registered deaths in the United States, for a crude rate of 940 deaths per 100,000 population. This was the first year since 1961 without widespread outbreaks of influenza. The 1964 death rate, however, was higher than that of any other noninfluenza epidemic year since 1954. In the first six months of 1965, there were 13,000 more deaths than there had been in the first six months of 1964, raising the crude rate from 940 to 970 deaths per 100,000 population.

Variations in Death Rates. Until 1954 the annual death rate decreased measurably. From 1954 to 1964 the rate varied, being higher in the years of influenza epidemics (1958, 1960, 1962, and 1963) and lower in the other years.

From 1963 to 1964, death rates decreased for every age group except that of 15 to 44. The greatest decreases occurred in the oldest and youngest groups, due in part to the high level of mortality at these ages during the serious influenza epidemic in early 1963. From 1962 to 1963, the death rates increased for every age group except that of children between 5 and 14. The increase for adults between the ages of 25 and 44 was especially large.

Infant and Maternal Deaths. The infant mortality rate for 1964 (24.8 deaths per 1,000 live births) was slightly lower than the rate for 1963 (25.2). The 1964 maternal death rate (33.3 per 100,000 live births) was somewhat below the 1963 rate (35.8), and it was markedly below the 1954 rate (52.4).

Leading Causes of Death. Since 1921, heart disease has outranked all others as the leading cause of death, accounting for about 39% of the deaths in 1964. Cancer ranked second, with 16%, and strokes third, with 11%. Influenza and pneumonia dropped from fifth place in 1963 to sixth place in 1964. Other bronchopulmonic diseases ranked tenth, with 69% of the deaths from these causes attributed to emphysema.

LEADING CAUSES OF DEATH IN U.S., 1964[1]

Ranking	Cause of death	Number	Rate
	All causes	1,798,051	939.7
1	Heart diseases	699,861	365.8
2	Malignant neoplasms (cancer), including neoplasms of lymphatic and hematopoietic tissues	289,577	151.3
3	Vascular lesions affecting the central nervous system (strokes)	198,209	103.6
4	Accidents	103,843	54.3
	Motor vehicle accidents	46,930	24.5
	Other accidents	56,913	29.7
5	Diseases of early infancy	60,322	31.5
6	Influenza and pneumonia, except pneumonia of newborn	59,451	31.1
7	General arteriosclerosis	37,176	19.4
8	Diabetes mellitus	32,279	16.9
9	Other diseases of circulatory system	25,745	13.5
10	Other bronchopulmonic diseases	23,427	12.2

[1] Data refer only to deaths occurring within the U.S. in 1964, and exclude fetal deaths. Rates per 100,000 population are based on midyear population estimates. Death causes are ranked on the basis of the U.S. Public Health Service list of 60 selected causes of death.

Motor Vehicle Deaths. The death rate for motor vehicle accidents rose for the third successive year. The 1964 rate of 24.5 per 100,000 population was the highest since 1941, when the death rate reached 30.0.

National Center for Health Statistics
Public Health Service
U.S. Department of Health, Education, and Welfare

DEATHS (OBITUARIES). For a listing and obituaries of prominent persons who died in 1965, see the NECROLOGY on pages 757–768.

DEFENSE. See NATIONAL DEFENSE.

DE GAULLE, Charles

President of France: b. Lille, France, Nov. 22, 1890.

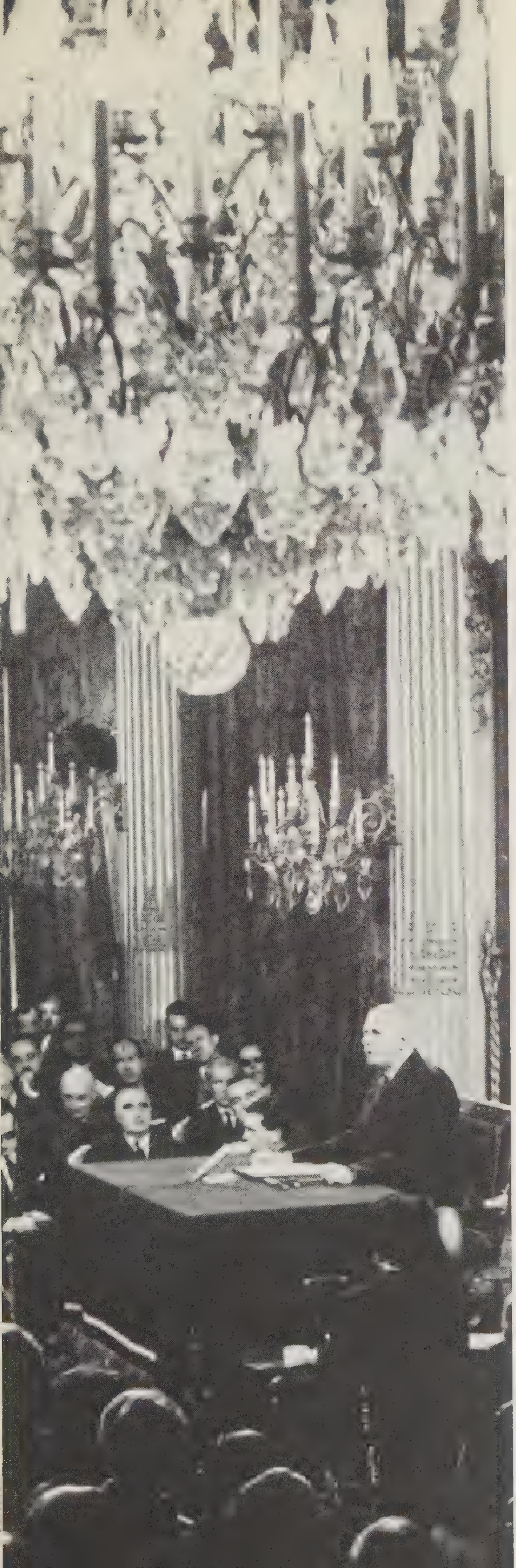
Although returned to office for a second seven-year term on Dec. 19, 1965, President Charles de Gaulle emerged from the election with his prestige deflated and his political strength dissipated. Expecting a massive personal victory that would crown his half-century of service to the nation, he received only a 44.6% plurality of votes cast in the original December 5 election, necessitating the December 19 runoff in which he won a 55.2% majority. Anticipating a rousing endorsement for his policies that would confirm his vision of France and its role in Europe and beyond, he heard rabid indictments from his opponents and received only modest approval from his supporters. Many observers felt that the final majority vote for de Gaulle reflected the French people's fear of change rather than their affirmation of Gaullism.

De Gaulle's France. The president's campaign for reelection got off to a poor start when, in announcing his candidacy on November 4, he claimed that without him the Fifth Republic would "crumble" and France would be "reduced to confusion more disastrous than she has ever known." His opponents seized upon this statement to drive home their point that France's "elective monarch" had confused himself with France. François Mitterrand, who proved to be the strongest contender, repeatedly attacked de Gaulle's "arbitrary use of personal power." "People ask anxiously," Mitterrand remarked, "'What will happen if de Gaulle retires?' and I ask anxiously, 'What will happen if he stays in power?'" To de Gaulle's claims that he was "a national necessity" and the only alternative to chaos, Mitterrand replied: "Who can pretend that France is nothing without him? No, General de Gaulle, you are wrong. France does not belong to you."

While attacking the alleged lack of democracy in France, the opposition also tried to refute the government's claims of economic achievement and social progress. However, de Gaulle could point with pride to the vast strides made since he returned to power in 1958. Admitting that problems remained, he asked for another term to solve them.

De Gaulle's Europe. The president's concept of the grandeur of France would not tolerate any fetters on French sovereignty. Under de Gaulle's guidance, France virtually withdrew from active participation in the European Economic Community (Common Market) and the North Atlantic Treaty Organization (NATO) in 1965. For these existing efforts toward Western European unity and integrated Atlantic defense, de Gaulle substituted his own grand design—a vague association of cooperating European states "from the Atlantic to the Urals," free of "excessive American domination." Critics charged that de Gaulle was both anti-American and anti-European. (See also EUROPE; FRANCE.)

Background. A soldier in the French Army from 1912, de Gaulle fought in both World Wars, rising to the rank of brigadier general, and led the "Fighting French" after France fell to the Germans in 1940. Between August 1944 and January 1946 he headed the postwar French government, but resigned because of friction with the National Assembly. In June 1958 he came out of retirement to accept a call to the premiership. Following the passage of a new constitution, he was elected president on Dec. 21, 1958.



KEYSTONE

PRESIDENT DE GAULLE holds one of his rare press conferences on Feb. 4, 1965, in the luxurious Élysée Palace.

DELAWARE

Charles L. Terry, Jr., former chief justice of the state Supreme Court, took office as the new governor of Delaware in January 1965.

Delaware's first redistricted General Assembly since 1897 convened also in January. The preponderance of New Castle County members in the new Assembly was demonstrated by the election of Harold Bockman, a first-term member from the county, as speaker of the House of Representatives.

Tax and Salary Reforms. The Democratic-controlled legislature provided new taxes, including larger auto registration fees and higher taxes for nonresidents employed in Delaware, to help meet a record $123 million budget. An overdue reform of the magistrate-constable system was enacted to take effect in 1966. The reform provides that justices of the peace and constables will be paid salaries in lieu of fees, and that new justices will be appointed by the governor and new constables will be named by the chief justice.

Mosquito Control. A part of the divestiture funds that came to the state as tax revenue derived from the distribution of General Motors stock among Du Pont shareholders was appropriated to support the first major mosquito-control project in Delaware in

DELAWARE · Information Highlights

Area: 2,057 square miles.
Population: 494,000 (1965 est.).
Chief Cities (1965 est.): Dover, the capital (12,000); Wilmington (92,500); Newark (13,800); Claymont (12,500); Elsmere (7,300); Milford (5,800); New Castle 4,500); Seaford (4,400).
Government: *Chief Officers*—governor, Charles L. Terry, Jr. (Democrat); lt. gov., Sherman W. Tribbitt (D); secy. of state, Elisha C. Dukes (D); atty. gen., David P. Buckson (Republican); treas., Belle S. Everett; supt. of pub. instr., Richard P. Gousha; chief justice, Daniel F. Wolcott. *Legislature*—General Assembly (convened Jan. 5, 1965): Senate, 18 members (13 Democrats, 5 Republicans); House of Representatives, 35 members (30 D, 5 R).
Education: *School enrollment* (1964–65)—public elementary, 59,000 pupils (2,300 teachers); public secondary, 44,750 pupils (2,100 teachers); nonpublic schools, 22,000 pupils (680 teachers); college and university (fall 1964), 12,431 students. *Public school expenditures* (1964–65)—$52,225,000 ($536 per pupil); teacher's median salary, $6,700.
Public Finance (fiscal year 1964): *Revenues*, $163,454,000 (motor fuel tax, $11,793,000; federal funds, $23,888,000). *Expenditures*, $175,996,000 (education, $70,949,000; health, welfare, and safety, $15,764,000; highways, $47,803,000). *State debt*, $219,802,000 (1964).
Personal Income (1964): $1,669,000,000; average annual income per person, $3,460.
Public Assistance (fiscal year 1965): $6,288,410 to 16,600 recipients (aged, $873,500; dependent children, $4,045,600).
Labor Force (employed persons, June 15, 1965): *Agricultural*, 13,600; *nonagricultural* (wage and salary earners), 201,700 (33.2% manufacturing, 16.4% trade, 12.3% government). *Unemployed persons* (June 15, 1965)—5,300.
Manufacturing (1963): Value added by manufacture, $666,245,000 (primary metals, $19,887,000; nonelectrical machinery, $11,661,000; fabricated metals, $24,773,000; food and products, $56,143,000).
Agriculture (1964): *Cash farm income*, $116,871,000 (livestock, $82,844,000; crops, $32,056,000; govt. payments, $1,971,000). *Chief crops* (tons)—corn for grain, 218,000; potatoes, 78,600; hay, 57,000; wheat, 23,000; barley, 15,000; rye, 8,800.
Mining (1964): *Production value*, $1,742,000 (ranks 50th among the states). *Chief minerals* (tons)—sand and gravel, 1,282,000; clays, 11,000.
Fisheries (1964): *Commercial catch*, 33,839,000 pounds ($684,000). *Leading species*—menhaden, 32,554,000 pounds ($378,000); hard blue crabs, 313,000 pounds ($32,000); clams, 418,000 pounds ($185,000); shad, 150,000 pounds ($19,000).
Transportation: *Roads* (1965), 4,294 miles (4,284 surfaced); *motor vehicles* (1965), 255,785; *railroads* (1965), 340 miles; *airports* (1964), 19.
Communications (1965): *Telephones*, 265,000; *television stations*, 1; *radio stations*, 12; *newspapers*, 3 (daily circulation, 137,772).

30 years. Ditches, pools, and diked impoundments are to be constructed on 35,000 acres of marsh.

New County Government. A new scheme of government for urbanized New Castle County was adopted by the legislature. Under the scheme, which is close to the recommendation made by a bipartisan gubernatorial committee, a county executive and a county council will be chosen in 1966. The councilmanic districts were drawn by the legislature in accord with senatorial districts. A merit system for county employees was adopted to help provide a measure of continuity in county administration.

Gubernatorial Vetoes. Governor Terry vetoed more measures in 1965 than his predecessor had in four years. Many of the vetoed bills were appropriation measures passed late in the year.

Civil Rights. Three fair-housing laws, designed to reduce racial discrimination in the sale and rental of real estate, were proposed during the legislative session, but failed to pass. Racial discrimination in the schools, however, continued to decline. Several hitherto all-Negro schools were incorporated into what had once been wholly white school districts, with the Negro pupils gradually being reassigned to all-white schools. The Methodist Church, the largest Protestant denomination in Delaware, merged its Peninsula (white) Conference, which includes parts of Maryland and Virginia, with the Delaware (Negro) Conference. A Negro, the Rev. John Shockley, became superintendent of the new integrated conference's largest district, Wilmington.

Economy and Construction. Although 1965 was the driest year in Delaware's history, it was nevertheless a prosperous year. Unemployment was at a record low, and the reported per-capita income for 1964 was the highest among the states.

The building industry featured many garden apartments in the suburbs of Wilmington.

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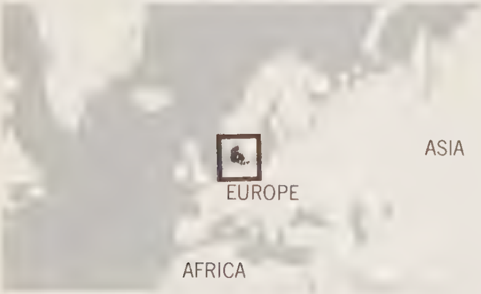
DEMOCRATIC PARTY. See POLITICAL PARTIES.

DENMARK



Major events of 1965 in Denmark included the debate in the Folketing (parliament) on the country's economy, and some budgeting solutions to these problems by means of changes in tax policy; the resignation of two outstanding political leaders; and the government's continued efforts to seek peaceful solutions for world problems.

Economy. Government efforts to control inflation led to a meeting of the four major political parties—an unusual event in Danish politics—to discuss proposals for excess profits taxes, an increase in the sales tax, and a shift from direct to indirect tax methods. The parties reached agreement on these proposals, and the Social Democratic minority government presented the reforms to the Folketing in the fall. As a result of the discussions, two "maverick" members of the Liberal party, maneuvering for entry into the cabinet, were ousted from their party as renegades and, by embarrassing the Social Democrats, lost the chance for cabinet posts.

Economic questions, arising primarily from domestic inflation and a serious imbalance in foreign trade, caused the most concern in Denmark during the year. Loss of foreign exchange reserves resulted in efforts to lessen imports, which showed an increase in consumer items, especially cars and luxury items. The worsening of the Danish foreign trade balance resulted in part from a decline in revenues from agricultural exports, despite increases in the volume of agricultural production in both 1964 and 1965. The gap between imports and exports could be met only through loans.

Other sectors of the economy improved, however. Both private and public building construction set a new record during the first half of 1965. Shipbuilding continued to increase because of the higher demand in the world market. The ceramic and stone industry, the chemical industry, and engineering enterprises proved to be the mainstay of Danish advances in production.

Two years of industrial peace were guaranteed by labor agreements signed in March that gave an increase in wages of about 5%. The only strike of consequence during the year was in the brewing industry.

Denmark had its lowest unemployment rate since

DENMARK · Information Highlights

Area: 16,619 square miles.
Population: 4,720,000 (July 1, 1964, est.).
Chief Cities (1963 est.): Copenhagen, the capital, 706,432; Aarhus, 120,069; Frederiksberg, 113,127; Odense, 110,521.
Government: *King*—Frederik IX (b. 1899; acceded 1947). *Prime Minister*—Jens Otto Krag (took office Sept. 3, 1962). *Parliament*—Folketing, 179 members; party seating (1965): Social Democratic, 76; Moderate Liberal, 38; Conservative, 36; others, 29.
Religious Faiths: Lutherans, 96% of population; Roman Catholics, 0.6%; others, 3.4%.
Education: *Literacy rate*—99% of population. *Total school enrollment* (1962)—871,198 (primary, 559,679; secondary, 126,141; teacher-training, 161; technical, 155,726; higher, 29,491).
Finance (1965 est.): *Revenues*, $1,860,000,000; *expenditures*, $1,780,000,000; *public debt* (1963), $1,058,000,000; *monetary unit*, krone (6.90714 kroner equal U.S.$1).
Gross National Product (1964): $8,907,000,000.
National Income (1964): $7,062,000,000; average annual income per person, $1,496.
Economic Indexes (1964): *Industrial production*, 160 (1958 = 100); *agricultural production*, 118 (1956–57 = 100); *cost of living*, 125 (1958 = 100).
Manufacturing (metric tons): Cement (1964), 2,000,000; processed meat (1963), 826,000; crude steel (1964), 404,400; gasoline (1963), 365,000; sugar (1963), 337,000; wheat flour (1962), 202,000; cheese (1964), 124,000.
Crops (metric tons, 1964): Barley, 3,928,000 (ranks 5th among world producers); sugar beets, 3,130,000 (world rank, 15th); oats, 821,000 (world rank, 10th); rye, 292,000 (world rank, 14th); potatoes, 1,213,000.
Minerals (metric tons, 1964): Diatomite, 20,000 (ranks 8th among world producers); kaolin (1963), 195,000; lime, 160,000.
Foreign Trade (1964): *Exports*, $2,119,000,000 (chief exports: manufactured goods, $793,300,000; bacon, $226,900,000; butter, $107,400,000); *imports*, $2,614,000,000 (chief imports, 1963: nonelectrical machinery, $231,000,000; transport equipment, $174,800,000; petroleum products, $168,200,000). *Chief trading partners* (1963): West Germany (took 17% of exports, supplied 21% of imports); Britain (took 23% of exports, supplied 15% of imports); Sweden (took 10% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 37,344 miles (31,069 paved); *motor vehicles* (1964), 822,412 (automobiles, 605,486); *railways* (1963), 2,030 miles; *merchant vessels* (1964), 337 (2,335,000 gross registered tons); *airline*, Scandinavian Airlines System (SAS); *principal airport*, Copenhagen.
Communications: *Telephones* (1964), 1,247,958; *television stations* (1964), 15; *television sets* (1964), 1,200,000; *radios* (1963), 1,631,000; *newspapers* (1963), 71 (daily circulation, 1,598,000).

1910 and, as a consequence, faced a labor shortage in some industries. The rate of production continued to climb, and the country registered an impressive increase in its gross national product.

Resignations of Political Leaders. Denmark lost an outstanding political figure of the postwar era when Erik Eriksen resigned as leader of the Liberal party. A former prime minister, a member of the Resistance during World War II, and a specialist in economic problems, Eriksen was replaced by Poul Hartling.

After concluding the four-party discussions on tax policy and the budget, Poul Hansen of the Social Democratic party resigned as minister of finance because of ill health. He was succeeded by Henry Grünbaum, the minister of economics, whose knowledge of economic affairs substantially aided in the passage of the budget act.

Foreign Policy. The foreign policy debate in the Folketing centered on Denmark's relations with the major powers, chiefly the United States. The government again pledged its support of NATO, but agreed to pursue peaceful solutions to the crisis in Vietnam.

Another foreign policy question concerned tariff reductions in the European Free Trade Association (EFTA). Britain agreed to permit a 5% cut in tariffs instead of the 15% cut proposed earlier. Denmark lost hope that a merger of the EFTA and the European Economic Community could be accomplished.

Anniversary Celebrations. During the spring of 1965, Denmark celebrated two anniversaries. One commemorated the German invasion of Denmark by the Germans in 1940; the other celebrated Denmark's liberation by Allied troops in 1945. In celebrations held throughout the country the Danish people paid homage to their national heroes.

Academic Controversy. Academic leaders heatedly debated the passage of a bill in the Folketing to return to Iceland medieval manuscripts from the Royal Library. Some of the manuscripts were returned to Iceland. The return of others, however, was blocked pending a court decision on the legality of the Folketing bill. The court had not decided on the case by the end of 1965.

RAYMOND E. LINDGREN
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DEPARTMENT OF DEFENSE. See NATIONAL DEFENSE; UNITED STATES.

DEPARTMENT OF STATE. See FOREIGN POLICY, U.S.; UNITED STATES.

DERMATOLOGY

A steady increase in basic knowledge and rapid multiplication of new treatments characterized dermatology in 1964 and 1965. But old problems that were thought to be conquered have reappeared. For example, the frequency of venereal diseases, especially syphilis, has increased markedly, although they had been well controlled until recently. Dermatologists again are examining the chancres and rashes that are produced by syphilis, especially in young people.

Psoriasis. Steroids such as fluocinolone acetonide and betamethasone have been found to be effective in psoriasis when incorporated in creams, applied to the lesions, and covered with thin plastic. Systemic therapy with methotrexate is beneficial and fairly safe, according to Eugene Van Scott and his colleagues at the National Institutes of Health (NIH).

Steroid drugs are quite effective when they are given on alternate days rather than daily. The alternate-day schedule reduces adrenal gland suppression. These drugs are indispensable, and any method of reducing unwanted side effects is important.

Herpes Zoster. Recent studies by Frank A. Elliot have demonstrated that corticosteroids given by mouth reduce the severity, duration, and morbidity of the disease, as well as the incidence of postherpetic pain.

Fungus Diseases. Tolnaftate, an original fungicide for local application, became available in 1965. It differs chemically from all its predecessors and is effective and nonirritating.

Mycosis Fungoides. This malignant disease was alleviated by Jane C. Wright and collaborators in nine of 16 patients by the use of antimetabolic drugs. The relief lasted 7½ to 24½ months. X-ray therapy previously had been unsuccessful in treating most of the patients.

Dimethylsulfoxide (DMSO). Investigation by Richard B. Stoughton and William Fritsche has shown that DMSO increases the permeability of the skin to several chemicals. Use of DMSO may solve the inveterate problem of conveying medication applied to the skin to an intracutaneous location. How the chemical works is a mystery, but its remarkable absorption through the skin has fostered high hopes and stimulated research.

Sun Eruptions. A new sunscreen, 2-hydroxy-4-methoxy-benzophenone-5-sulfonic acid (UVAL), was developed in 1965, primarily through the research of John M. Knox. It appears to protect against solar energy of wavelengths that are not screened by competing pharmaceuticals. It is particularly valuable in preventing eruptions caused by wavelengths greater than 2,900 angstrom units, which produce most phototoxic drug eruptions.

Allergy. Reliable tests are not yet available for singling out individuals who might react fatally to penicillin or other medicines. Such a test may evolve from the work of investigators who have observed that the patient's basophilic white blood cells suddenly lose granules when exposed to a drug to which the patient is allergic.

Acne. It has been shown that when blackheads are removed from one side of the face and not from the other, the treated side improves much more rapidly. Richard D. Lowney and collaborators tested the method with 32 patients, and their findings should eliminate controversy over the value of the procedure.

Pigmentary Disorders. Patchy excesses of brown skin pigment are distressing, and they seem to be inceasing in incidence. Some birth-control pills can induce hyperpigmentation of the face. Hyperpigmentation of areas exposed to the sun have been found in several patients who took large doses of chlorpromazine over long periods of time. Chlorpromazine may also cause slate-gray skin discoloration resembling argyria, according to Clayton E. Wheeler and collaborators.

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Clinical Professor of Medicine; and
DAVID R. WEAKLEY
Assistant Clinical Professor of Medicine
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DESEGREGATION. See CIVIL RIGHTS; EDUCATION; LAW; UNITED STATES; and articles on the states.

DESIGN. See ARCHITECTURE; FASHIONS; INTERIOR DECORATION.

DETROIT

Detroit voters reelected Mayor Jerome P. Cavanagh in municipal elections on November 2. During 1965 the face of the city continued to be changed under the stimulus of federal, city, and private spending for urban renewal and other construction projects.

Municipal Elections. On November 2, Mayor Jerome P. Cavanagh was elected to a second term of office, receiving 67.1% of the vote. His opponent was candidate Walter C. Shamie, Detroit publisher and land developer. The city also elected the second Negro councilman in its history—the Rev. Nicholas Hood.

Urban Renewal and Other Construction. Fourteen urban renewal projects, costing a total of $89 million and designed to attract $440 million in private investment, were in progress at the end of 1965. The $10 million Detroit Trade Center, on the western fringe of the downtown area, was nearing completion, and construction was under way on a $15 million residential project on the east side. The new 25-story, 450-room Hotel Pontchartrain opened in July in the Civic Center.

During the year, city officials began planning a 63-acre research park to be built on the north side of the downtown area, and initiated a 10-year plan for a cultural center adjacent to Wayne State University.

The J.L. Hudson Co., Detroit's leading department store, continued its expansion into the suburbs by opening a branch at Westland, a $10 million development in Nankin Township.

Storm. The worst storm in 35 years hit the Detroit metropolitan area on February 25 and 26, when 11 inches of snow fell in a 24-hour period. Communications were paralyzed and business came to a standstill. Twenty-seven deaths were attributed to the storm, and losses from property damage were estimated in the millions of dollars.

Grand Jury Investigation. A one-man grand jury investigation of charges of traffic ticket "fixing" by members of the Wayne County Sheriff's Department was started under the direction of Circuit Judge Edward Piggins. The investigation was still under way as the year ended.

Economy. Detroit businesses enjoyed a year of prosperity in 1965. The boom was led by the auto industry, which turned out a record 9,335,182 cars and 1,802,182 trucks.

Detroit's anti-poverty program was put into full effect during the year. A total of 34 projects, costing $12 million and involving 200,000 central city residents, was underway.

The 1965–66 city budget of $367.4 million permitted a property tax reduction of $1.24 for each $1,000 of assessed valuation.

Schools. Detroit's public schools operated on a budget of $153.5 million for the 1965–66 school year. A total of 295,000 students were enrolled in the public schools. Federal grants totaling $20 million were used to implement special programs, including a preschool program for 6,000 underprivileged children.

Population. Population within Detroit's city limits dropped slightly in 1965, to an estimated 1,630,000 persons, according to an estimate of the Detroit Metropolitan Regional Planning Commission. However, the commission reported an increase of 111,000 persons in the four-county metropolitan area—the largest annual increase in the metropolitan population since 1956. The commission estimated that the metropolitan area has a total population of 4,243,200, as compared with 3,934,800 at the 1960 census.

Suburban Warren, on Detroit's northern boundary, was the fastest growing city in Michigan, adding about 1,000 persons each month.

Charles Theisen
Staff Writer, The Detroit News

DÍAZ ORDAZ, Gustavo. See biographical sketch under Mexico.

DIPLOMATIC LIST. See Ambassadors and Envoys.

DISARMAMENT. See United Nations; United States.

DISASTERS

The worst disaster of 1965 took place in East Pakistan, where cyclones struck the coast in May and June, exacting a death toll of more than 45,000. Taal Volcano in the Philippines erupted for the first time since 1911, killing 208 persons.

In the United States, hurricane Betsy struck Florida, Louisiana, and Mississippi in September, causing at least 90 deaths and property damage estimated at $400 million. A series of tornadoes swept the midwestern U.S. in April, killing 242 persons.

Air disasters included the crash of a Pakistani International Airliner in May, in which 119 persons were killed, and the crash of a Chilean airliner in February which killed 87, and the crash of a U.S. Air Force transport jet in June which killed 84 persons.

Noteworthy disasters and accidents of 1965 include the following:

AVIATION

U.S. Air Force jet crashes in residential section of Wichita, Kans., killing 30 persons, Jan. 16.

Chilean airliner crashes in Andes, killing all 87 persons aboard—worst air disaster in Chilean history, Feb. 6.

Eastern Air Lines D-C7 crashes in sea off Long Island, N.Y.; all 84 aboard are killed, Feb. 9.

Iberia Airlines plane crashes in Strait of Gibraltar, killing 50 of 53 persons aboard, March 31.

Royal Jordanian Airliner crashes on mountain near Damascus, Syria, killing all 54 persons aboard, Apr. 10.

British United Airways airliner crashes at Jersey, Channel Islands, killing 26, Apr. 14.

Iberia Airlines plane crashes at Santa Cruz de Tenerife, Canary Islands; 32 of 49 aboard are killed, May 5.

Pakistani International Airlines jetliner crashes near Cairo, Egypt, killing 119 of 125 persons aboard, May 20.

Two army helicopters collide at Fort Benning, Ga., killing 18 persons, June 15.

U.S. Air Force transport jet crashes into mountain ridge near Los Angeles, Calif., killing 84 persons, June 25.

British Royal Air Force plane explodes and crashes near Nuneham Curtnay, England, killing 41 persons, July 6.

Canadian Pacific airliner crashes northeast of Vancouver, B.C.; 52 persons aboard are killed, July 8.

U.S. Air Force radar plane crashes northeast of Nantucket Island, Mass.; 16 crewmen are killed, July 12.

United Air Lines jet crashes in Lake Michigan north of Chicago, killing all 30 persons aboard, Aug. 16.

U.S. Marine Corps transport plane crashes into sea at Hong Kong; 58 persons are killed, Aug. 24.

Pan American jetliner crashes on mountain peak in Montserrat, British West Indies, killing 30 persons, Sept. 17.

British European Airways plane crashes in fog at London Airport, killing 26, Oct. 27.

Argentine Air Force plane crashes near Limón, Costa Rica; 68 persons are killed, Nov. 3.

American Airlines plane crashes into hill near Cincinnati, Ohio, killing 58 persons, Nov. 8.

Boeing 727 jet crashes while landing at Salt Lake City, Utah, killing 43, Nov. 11.

Eastern Airlines Constellation and Trans World Airlines 707 collide over Danbury, Conn.; 4 persons are killed, 50 injured, Dec. 4.

Spanish charter plane crashes at Santa Cruz de Tenerife, Canary Islands, killing 32, Dec. 7.

EARTHQUAKES

Earthquake strikes central Chile, breaking 230-foot dam in village north of Santiago; 400 persons drowned, March 28.

Earthquake in El Salvador hits San Salvador and suburbs, killing 100 and taking heavy toll in injuries and damages, May 3.

KILLER TORNADOES caused this scene of destruction in the Illinois community of Crystal Lake, where about 100 homes were destroyed. The series of twisters, which struck six midwestern states on April 11, 1965, killed 242 persons.

UPI

FIRES AND EXPLOSIONS

Explosion in coal mine near Lens, France, kills 21 miners, Feb. 2.
Fire on Madrid-Barcelona mail train near Zaragoza, Spain, kills 25, Feb. 10.
Coal mine explosion on Hokkaido, Japan, kills 35 miners, Feb. 22.
Explosion and fire at housing development in Montreal, Que., kills 28 and injures 50, March 1.
Explosion of natural gas pipeline at Natchitoches, La., kills 17 persons and injures 6, March 4.
Series of gas explosions in government-owned lignite mine near Amasya, Turkey, kills 68 miners, March 19.
Explosions at U.S. airbase in Bienhoa, South Vietnam, kill 21 persons, mostly U.S. servicemen, May 16.
Gas explosion in coal mine in Tonypandy, Wales, kills 31 miners, May 17.
Coal mine explosion in the State of Bihar, India, kills about 375 miners, May 28.
Explosion at coal mine in Kyushu, Japan, kills 237 miners, June 1.
Coal mine explosion near Sarajevo, Yugoslavia, kills 108 miners, June 7.
Explosion and fire in Titan II missile silo near Searcy, Ark., kills 53 persons, Aug. 9.
Two explosions at Du Pont synthetic rubber plant at Louisville, Ky., kill 12 persons and injure 37, Aug. 25.
Gas explosion at National Guard Armory in Keokuk, Iowa, kills 30 persons and injures 30, Nov. 24.

FLOODS

Flash flood in southwest Texas kills 16 persons, June 11.
Floods in South Korea kill a reported 74 persons, July 18.
Floods in Chile kill 96 persons and leave 70,000 homeless, Aug. 16.
Flash flood strikes village of Khem Khemis Nagua, Morocco; 75 persons are killed, Sept. 23.
Flash floods and heavy rains in southern California cause 11 deaths, Nov. 23.

HURRICANES, TORNADOES, AND TYPHOONS

Tornadoes sweep six Midwestern states, killing 242 persons and injuring thousands, Apr. 11.
Tornado hits 15 Minneapolis suburbs; 13 persons are killed and 400 injured, May 6.
Cyclone and tidal waves hit coast of East Pakistan, killing more than 45,000 persons, May 11–12 and June 1–2.
Typhoon hits Japan; 17 persons are killed and 10 are reported missing, May 27.
Hurricane Betsy hits Florida, New Orleans, lower Louisiana, and Mississippi, killing 90 persons; property damage is estimated at $400 million, Sept. 7–10.
Typhoon strikes central and northern Japan; 48 persons are killed and 780 are injured, Sept. 10.
Typhoon strikes Japan; 93 persons are killed and 28 are reported missing, Sept. 19.
Coast of East Pakistan is hit by cyclone; 478 persons are killed, Dec. 15.

MARINE

Cruise ship *Yarmouth Castle* burns and sinks in Caribbean Sea, 40 miles off Nassau, Bahamas; 90 of 550 persons aboard die, Nov. 13.

WIDE WORLD

CRASH LANDING of Boeing 727 jet liner at Salt Lake City on Nov. 11, 1965, killed 42 of the 91 persons aboard.

ERUPTION of Taal Volcano in September 1965 buried Volcano Island in the Philippines under hot lava, killing 208.

UPI

UPI

VICTIMS OF EARTHQUAKE which devastated El Cobre Valley, Chile, on March 28 are given a mass burial service.

RAILROADS

Commuter train is derailed near Durban, South Africa, killing 81 persons and injuring 130, Oct. 4.

Train wreck at Villar de los Álamos, Spain, kills 37 persons, Dec. 18.

MISCELLANEOUS

Mine elevator cage falls into 150 feet of water at Real del Monte, Mexico, killing 27 miners, May 8.

Avalanche at Garmisch-Partenkirchen, Germany, kills 10 persons, May 15.

Bus and truck collision near Vinton, La., kills 11 persons and injures 28, Aug. 27.

Avalanche at Saas-Fee, Switzerland, buries machines and workers at a hydroelectrical construction project; at least 11 persons are killed, Aug. 30.

Taal Volcano erupts in the Philippines, killing 208 persons, Sept. 28.

Trolley bus plunges into Nile River at Cairo, Egypt, drowning 74 persons, Nov. 1.

DISCIPLES OF CHRIST. See CHRISTIAN CHURCHES.

DISEASES. See MEDICINE; PUBLIC HEALTH; and articles on specific diseases such as CANCER, HEART DISEASE, RESPIRATORY DISEASES, etc.

DISTILLING INDUSTRY

The production of distilled spirits at plants in the United States during the fiscal year 1965 increased by more than 26 million tax gallons over the preceding year.

U.S. DISTILLED SPIRITS PRODUCTION

	Fiscal Year, 1965 (Tax gallons[1])	Fiscal Year, 1964 (Tax gallons[1])
Whiskey	117,930,282	102,731,916
Brandy	11,521,724	11,142,801
Rum	2,273,811	2,128,832
Gin	25,560,827	23,625,545
Vodka	12,620,937	10,836,521
Alcohol and spirits:		
190° and over	658,640,527	647,818,852
Under 190°	36,691,486	40,693,628
Total	865,239,594	838,978,095

[1] A tax gallon (proof gallon) is a standard U.S. gallon of 231 cu. in. containing 50% of ethyl alcohol by volume; a wine gallon is a standard U.S. gallon regardless of proof.

Rectified Spirits. In the fiscal year 1965, rectifying plants used 92,029,395 proof gallons (88,223,642 gallons in 1964) of domestic and imported liquors. Production by rectification amounted to 92,923,020 proof gallons (88,032,999 gallons in 1964).

Output for Consumption. In the calendar year 1964 the bottled output of domestic and imported distilled spirits totaled 243,104,932 wine gallons, or an increase of 8.6% over 1963. Whiskey bottled during 1964 amounted to 160,880,515 wine gallons, accounting for 66.2% of total distilled spirits bottled.

The remainder of the bottled output included: gin, 28,962,849 gallons; vodka, 28,130,209; rum (bottled in continental United States and not including rum imported from Puerto Rico), 1,542,547; brandy, 7,574,936; cordials, liqueurs, and similar products, 3,252,486.

Revenues. Revenues accruing to the federal government from distilled spirits during the calendar year 1964 amounted to $2,742,090,000, an increase of 6.3% over 1963. This amount accounted for 72.6% of federal collection from alcoholic beverages, which totaled $3,777,247,000. Taxes on beer accounted for 24.0% of the total alcoholic beverage receipts, and those on wine, 3.4%. The federal excise tax on distilled spirits was $10.50 per proof gallon.

Apparent Consumption. The apparent consumption of distilled spirits in the United States in the calendar year 1964 amounted to 276,046,815 wine gallons, an increase of 6.6% over 1963. The figures are based on actual wholesale and retail sales in the control states, and on tax collections or shipments (in gallons) to wholesalers in the license states.

U.S. DISTILLED SPIRITS WITHDRAWALS

	Fiscal Year, 1965 (Tax gallons)	Fiscal Year, 1964 (Tax gallons)
Tax-paid withdrawals:		
Whiskey, total	89,772,997	86,631,029
Whiskey, bottled-in-bond[1]	7,550,338	8,091,759
Brandy	7,438,580	6,493,486
Rum	329,878	240,042
Gin	25,166,771	23,494,362
Vodka	12,538,491	10,819,528
Alcohol and spirits:		
190° and over	49,419,816	51,740,055
Under 190°	19,985,546	13,284,406
Total tax-paid withdrawals	204,652,079	192,702,908
Tax-free withdrawals:		
For addition to wines:		
Brandy	1,285,746	703,113
Spirits	35,971,241	39,918,571
For export:		
Whiskey only	1,400,403	1,334,379
Other distilled spirits	5,355,380	22,495,448
Transfers to customs manufacturing bonded warehouses:		
Whiskey only	312,989	319,859
Other distilled spirits	332,393	433,694
For vessels and aircraft	2,627	3,104
To foreign-trade zones	180	3,722
For use of U.S. government	799,847	639,098
Alcohol for hospital, scientific, and educational uses	3,028,252	3,019,083
Alcohol for medicinal, beverage, and other purposes in Puerto Rico	122,606	101,751
Used for denaturation:		
Alcohol	580,136,507	538,673,598
Rum	1,518,807	1,531,922
Total tax-free withdrawals	630,266,986	609,177,362

[1] Included in total whiskey.

Imports and Exports. U.S. dutiable imports of distilled spirits during the calendar year 1964 amounted to 50,733,976 tax gallons, with whiskey comprising 44,455,567 gallons of the total. In 1964, exports of distilled spirits from the United States to foreign destinations (exclusive of military shipments) amounted to 2,129,187 proof gallons.

Distillers' Dried Grains. Production of distillers' dried grains at all distilled spirits plants during the calendar year 1964 consisted of 355,200 tons of dark grains, 22,300 tons of light grains, and 20,100 tons of dried solubles. Total production amounted to 397,600 tons.

ROBERT W. COYNE
President, Distilled Spirits Institute, Inc.

DISTRICT OF COLUMBIA. See WASHINGTON, D.C.

DIVORCE. See MARRIAGE AND DIVORCE.

DOG SHOWS. See SPORTS.

DOMINICAN REPUBLIC

At the beginning of 1965, a provisional government of center-right orientation was in office in the Dominican Republic, preparing to hold presidential elections. After a disastrous civil war, the year ended almost as it began, with a center-left provisional government making preparations for elections. But all was not the same. Four months of warfare had resulted in at least 2,000 deaths, inflicted massive economic damage, and left the country tense and divided. Moreover, intervention by United States forces caused an upheaval in U.S.-Latin American relations that would long be felt.

Background to the Revolution. The Dominican rebellion had complex economic, political, and military antecedents. Donald Reid Cabral, an able businessman-politician without much popular following, headed a provisional government that had originated with the military overthrow of the constitutional government of Juan Bosch on Sept. 25, 1963. Aiming at victory in the presidential election planned for September 1965, Reid Cabral had manipulated two strong military figures out of their jobs—the armed forces secretary and the police chief. The prospect of civilian control of the armed forces was eyed askance by other members of the military establishment, especially Col. Pedro Benoit of the air force and Gen. Elías Wessín y Wessín, who was commander of the Center for Armed Forces Training (CEFA) and had played a key role in the overthrow of Bosch.

In addition, Reid apparently intended to refuse readmission to the country of its two most popular figures, ex-Presidents Juan Bosch, head of the Partido Revolucionario Dominicano (PRD) of the democratic left, and Joaquín Balaguer, head of the Partido Reformista (PR) and an enigmatic figure identified both with the late dictator Rafael Trujillo and with the transition from Trujilloism.

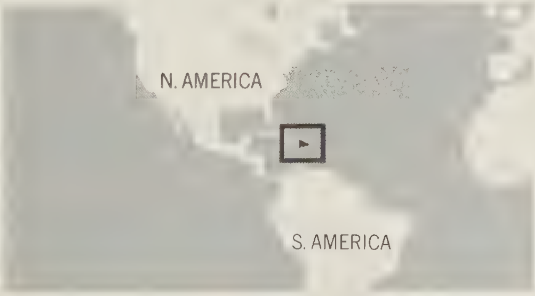
Despite Reid's sensible policies, the economy and the government budget were undermined by a deep drop in price of sugar, the country's major product, in 1964. In desperation, Reid cancelled that year's traditional Christmas bonuses for workers, cut payrolls in the sugar industry, and announced his intention of reducing the military budget and eliminating a military smuggling racket.

UPI

SANTO DOMINGO is patrolled by U.S. soldiers on May 5, soon after the United States intervened in the Dominican civil war to prevent a possible Communist takeover.

The complexity of the succeeding revolutionary and counterrevolutionary events reflects the fact that a wide range of military and civilian groups, of all political persuasions, opposed the Reid government for imposing these and other measures.

DOMINICAN REPUBLIC Information Highlights



Area: 18,704 square miles.
Population: 3,573,000 (July 1, 1965 est.).
Chief Cities (1965 est.): Santo Domingo, the capital, 435,155; Santiago, 99,020; San Francisco de Macoris, 30,824; La Romana, 28,521.
Head of Government: *Provisional President*—Héctor García Godoy (took office Sept. 3, 1965).
Religious Faiths: Roman Catholics, 96% of population; Protestants, 1%.
Education: *Literacy rate* (1964)—35% of population. *Total school enrollment* (1962)—550,443 (primary, 479,084; secondary, 40,419; teacher-training, 346; technical, 25,272; higher, 5,322).
Finance (1965 est.): *Revenues,* $179,934,000; *expenditures,* $179,934,000; *monetary unit,* peso (1 peso equals U.S.$1).
Gross National Product (1963): $784,000,000.
National Income (1963): $628,000,000; average annual income per person, $188.
Cost of Living (1964): 112 (1958=100).
Manufacturing (metric tons): Sugar (1964), 880,000; cement (1963), 229,000; meat (1962), 28,000; cheese (1961), 1,000; cotton yarn (1962), 100; beer (1963), 285,600 hectoliters; lumber (1962), 55,000 cubic meters.
Crops (metric tons): Cocoa beans (1964–65 crop year), 40,000 (ranks 6th among world producers); cassava (1962–63), 148,000; rice (1963–64), 144,000; maize (1962–63), 104,000; sweet potatoes and yams (1962–63), 76,000; peanuts (1963–64), 52,000; coffee (1964–65), 31,500; citrus fruit (1964–65), 29,000.
Minerals (metric tons, 1964): Bauxite (exported to U.S.), 650,000 (ranks 12th among world producers); salt, 33,000; gypsum, 30,000; lime (1962), 7,300; iron ore (1960), 123,000; gold (exported to U.S., 1960), 308 troy ounces.
Foreign Trade (1964): *Exports,* $179,900,000 (chief exports: sugar, $92,700,000; coffee, $30,200,000; cacao, $16,100,000; tobacco, $15,000,000); *imports,* $220,000,000 (chief imports, 1962: cotton piece goods, $11,650,000; chemical and pharmaceutical products, $10,400,000; motor vehicles, $6,230,000; fuel oil, $3,900,000). *Chief trading partners* (1963): United States (took 77% of exports, supplied 61% of imports); Canada (took 3% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 5,794 miles (2,645 paved); *motor vehicles* (1964), 24,500 (automobiles, 14,000); *railways* (1963), 137 miles; *merchant vessels* (1964), 5 (13,000 gross registered tons); *airlines* (1964), 4 international; *principal airport,* Santo Domingo.
Communications: *Telephones* (1964): 27,514; *television stations* (1964), 4; *television sets* (1964), 35,000; *radios* (1961), 150,000; *newspapers* (1962), 5 (daily circulation, 86,000).

UPI

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CAPTURED REBELS (*above*), stripped of shoes, are guarded by U.S. troops in Santo Domingo.

EVACUEES from the Dominican Republic (*left*) come ashore at San Juan, Puerto Rico, on April 28.

Outbreak of Civil War. The revolt began on the morning of April 24, 1965, when the army chief of staff, Gen. Marcos Rivera Cuesta, after arresting three leading anti-Reid conspirators, including Colonel Benoit, was himself arrested by their supporters. That afternoon, the rebels seized a radio station long enough to broadcast that the Reid government had been overthrown. At this point, the various antigovernment groups were held together by a loose formula under which a new military junta would be formed to hold elections in which both Bosch and Balaguer would be permitted to run. However, the younger pro-Bosch conspirators, who still regarded Bosch as the legal president, suspected that the generals who had overthrown Bosch would not allow him to return to power.

Operating on this premise, the pro-Bosch group demanded the return of Bosch from exile in Puerto Rico and the restoration of the constitution of 1963. Pending these developments, they established a "constitutional" rebel government headed by Chamber of Deputies President Rafael Molina Ureña, who, during the Bosch era, had been next in line for the presidency under the terms of the constitution.

Confusion reigned as civilians armed by some of the rebel elements took bloody revenge, especially against the hated police. Then, on April 25 and 26, the bulk of the regular military forces, led by General Wessín, attacked Santo Domingo from CEFA headquarters at the nearby San Isidro air base, advancing with tanks and strafing from the air. Defeat seemed imminent for the "constitutionalist" cause, and many of its leading figures, including Molina Ureña, took refuge in foreign embassies.

On April 28, Wessín named a governing junta of three officers headed by Colonel Benoit. But the "constitutionalist" forces revived when support came from the overwhelming majority of the population. Juan Bosch did not return from Puerto Rico during this period, but he kept in close contact by telephone with the "constitutionalist" rebel leaders, who followed his instructions. The remaining members of the old congress then elected Col. Francisco Caamaño Deñó, the ranking military officer in the rebel camp, as "provisional president."

Caamaño's adherence to the rebel cause was typical of the strange political realignments brought about by the revolution; he formerly had been chief of the feared white-helmeted riot squad. A leading member of his staff belonged to the center-right *Partido Liberal Evolucionista* (PLE), and another belonged to Bosch's PRD. Also in the rebel camp was the bulk of the Revolutionary Social Christian party, of the Catholic left, and three far-left parties. These were the Popular Socialists (later the Dominican Communist party), which was Moscow-oriented and the most moderate of the three; the *Movimiento Popular Dominicano*, a Peking-oriented revolutionary group; and the Castroite 14th of June Movement, the largest and most influential.

UPI

JUAN BOSCH, former president of the Dominican Republic, returned to Santo Domingo from exile in Puerto Rico on Sept. 25, 1965, the second anniversary of the military coup that ended his administration. His dramatic homecoming came after a four-month civil war between his supporters and those of the governing junta. Although he had been deposed because of his alleged Communist sympathies, Bosch has described himself as a spokesman for the anti-Communist democratic left. He is expected to be a presidential candidate in 1966.

Bosch was born in La Vega on June 30, 1909. An opponent of the Dominican dictator, Rafael Trujillo, he left the country in 1937 and spent 24 years in Cuba and elsewhere in Latin America. While in exile, he helped found the Dominican Revolutionary party. After Trujillo's assassination on May 30, 1961, Bosch returned to the Dominican Republic and built up his party. He was elected president on Dec. 20, 1962, in the country's first free elections in 38 years. A writer and scholar, Bosch is also known for his works of fiction and biography.

UPI

REBEL LEADER Caamaño signs the act of reconciliation ending the civil war on August 31.

UPI

JUNTA LEADER Imbert (right) attends June 18 meeting of the three-man OAS peace commission.

U.S. and OAS Intervention. Fearing that the far left would turn the Dominican Republic into "another Cuba" if the Wessín forces were allowed to collapse, U.S. Ambassador W. Tapley Bennett, Jr., requested U.S. military intervention. On April 28, 405 U.S. Marines landed in Santo Domingo—the first contingent of a force that eventually totaled over 20,000 troops. The early U.S. action aided the Wessín forces, and its effect was to prevent the victory of the "constitutionalists." The original reason given for the intervention—that it was necessary to safeguard American lives—was ironic in that no American lives were lost before the intervention, but that some Americans were killed after it.

Meanwhile, the U.S. Central Intelligence Agency (CIA) compiled a list of 58 alleged Communists active in the rebel camp. The list proved to be inaccurate in many respects. However, in view of the fact that most of the civilian population of central Santo Domingo supported the rebels, there were presumably more than 58 Communists among the tens of thousands of non-Communists on the rebel side.

U.S. officials were instrumental in the creation of a new military junta on May 7. This junta, called the Government of National Reconstruction, was headed by Gen. Antonio Imbert Barreras, who was one of the group that had assassinated Trujillo, but was also regarded as a ruthless former accomplice of the Trujillo regime and, more recently, as an opportunistic collaborator with the far left.

On May 6, prior to the creation of the Imbert junta, the Organization of American States (OAS) approved a U.S. proposal for the creation of an Inter-American Peace Force. Subsequently, the U.S. forces in the Dominican Republic were joined by contingents from Paraguay, Nicaragua, Honduras, and Brazil.

The Inter-American force, officially constituted on May 24 under a Brazilian commander, established an international zone in Santo Domingo that separated the opposing sides. Several temporary cease-fires had reduced (but not ended) the fighting, and the situation settled into a stalemate while representatives of the United States, the OAS, the UN, and the Vatican sought a negotiated settlement. Meanwhile, forces of the Imbert government carried out political reprisals, torturing and killing suspected opponents.

Negotiations. The United States, which came under considerable criticism for the role it had played thus far, changed its policy to that of searching for a generally acceptable center-left moderate to head a transitional government that would reunite the country and restore constitutional processes. Various U.S. negotiators, including at one point presidential assistant McGeorge Bundy, took part.

On June 4, negotiations were taken over by a three-man team of OAS ambassadors from Brazil, El Salvador, and the United States (Ellsworth Bunker). The person found most acceptable as the

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HÉCTOR GARCÍA-GODOY was sworn in as provisional president of the Dominican Republic on Sept. 3, 1965, after warring factions in the Dominican rebellion signed a reconciliation act sponsored by the Organization of American States. An experienced diplomat and businessman, García-Godoy was faced with the need to heal the deep animosities and to repair the damaged economy resulting from the civil war. The new president, who had served under the Dominican dictator Rafael Trujillo and President Juan Bosch, describes himself as a "middle-of-the-roader with a very broad middle."

García-Godoy was born in Moca on July 11, 1921. He went to school in Washington, D.C., where his father was in the Dominican embassy, but returned to the Dominican Republic to take a law degree at the University of Santo Domingo in 1944. He successfully pursued careers in both business and government service, becoming vice governor of the Dominican Central Bank (1955), ambassador to Belgium (1958), and foreign minister in Bosch's cabinet (1963).

WIDE WORLD

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transitional leader was Héctor García-Godoy, a diplomat who had served in every recent government except Reid's. The agreement ending the conflict provided for presidential elections, later scheduled for June 1, 1966, in which García-Godoy could not be a candidate.

In the maneuvering preceding the final agreement, Imbert was brought to heel by the cutting off of U.S. funds that had been paying the salaries of his government's employees. The Caamaño "constitutionalists" were shown the weakness of their position when inter-American troops made a successful foray into their territory, ostensibly to clear out snipers. As a result, the Imbert and Caamaño forces did not contest the "act of reconciliation" concluded on August 31.

The New Government. García-Godoy, administering the oath himself, was sworn in as provisional president on September 3. Hardly had he been inaugurated when rightist groups and military forces became restive over his moves to reduce the power and expense of the armed forces and over the presence in his government of two former leaders of the "constitutionalist" forces. The United States backed García-Godoy by forcibly escorting General Wessín to exile in Miami, Fla.

The tense situation was complicated by the return to the island, on September 25, of an embittered Juan Bosch. (Balaguer had returned on June 28.) Bosch was wildly cheered when he demanded that the United States pay a $1 billion indemnity and, with other intervening nations, be brought before the International Court of Justice on charges of violating Dominican sovereignty.

Bombings, attempted coups, sniper shootings, and murders of prominent left- and right-wing figures continued. The Inter-American Peace Force remained to keep order, while the provisional government, with U.S. aid, struggled to rebuild the economy.

On December 19, 28 Dominicans were killed in Santiago de los Caballeros in a clash between government troops and soldiers of the former rebel movement. Early in 1966 another crisis stopped just short of becoming a coup d'état. On January 6, President García-Godoy ordered 34 officers from the regular armed forces and the ex-rebels to diplomatic posts abroad. The armed forces seized the government radio station and began broadcasting accusations that the president was arranging a Communist takeover. They were forced to capitulate, however, under pressure from the Inter-American Peace Force.

MARTIN C. NEEDLER
Assistant Professor of Political Science
University of Michigan

DRAMA. See THEATER.
DRUG TRAFFIC. See NARCOTICS.

DRUGS

In 1965, all phases of the drug industry in the United States—retailing, manufacturing, and research—kept abreast with the ever-increasing health demands and needs of an expanding population. At the same time, governmental interest in the manufacture, distribution, and consumption of drugs led to the introduction of legislation and the passage of laws important to the drug industry.

Sales and Economic Growth. The nation's pharmacists dispensed medications for a record-breaking 820 million prescription orders during 1964. The average prescription charge was $3.42, an increase of 7 cents from the 1963 charge. Sales by the 54,000 pharmacies in the United States totaled about $10 billion, including $6.3 billion for drugs and health-related products.

Worldwide ethical pharmaceutical sales by U.S. firms in 1964 increased 7% over 1963, and totaled $3.7 billion, on which ethical pharmaceutical manufacturers paid a record $505 million in taxes. During the year, the industry employed 189,000 persons, of whom about 117,000 worked in the United States. The typical U.S. firm had an average capital investment of $45,200 for every drug production employee.

In 1964, new trade-named pharmaceuticals numbered 463, compared with 576 in 1963. Seventeen of the pharmaceuticals introduced in 1964 were new single chemical entities.

Drug Legislation. In 1965 the U.S. Congress passed the so-called Medicare bill. This legislation provides for hospital and nursing-home care for the aged and authorizes state welfare drug programs. (See MEDICARE.) Congress also passed the Drug Abuse Control Amendments, which established special controls for depressant and stimulant drugs (see NARCOTICS), and the Health Professions Educational Assistance Amendments, which included construction aid for pharmacy schools and loans and scholarships for pharmacy students. In another move, Congress honored Dr. Jonas Salk and The National Foundation with a resolution on the 10th anniversary of the discovery of the Salk anti-polio vaccine.

The issuance of drug patents was the subject of several legislative proposals. Other proposed measures dealt with officially changing weights and measures from the present American (English) system to the metric system, the standard now used by most major U.S. drug manufacturers. Legislation also was proposed to control possible patient exploitation and physician profits whenever physicians dispense drugs or own pharmacies.

Food and Drug Administration. In 1965 the Food and Drug Administration (FDA) ordered that inhalers containing methamphetamine could be issued only by prescription. The FDA set similar requirements for preparations containing potassium salts or having more than 400 USP (United States Pharmacopoeia) units of Vitamin D per dosage unit. The FDA also ordered several important drug labeling changes.

The World Health Organization in Geneva adopted a resolution to study the automatic data-processing facilities of the FDA to determine whether the FDA facilities can be used on a worldwide basis to warn about adverse drug reactions.

American Pharmaceutical Association. More than 3,000 persons participated in the professional, educational, and scientific programs at the annual meeting of the American Pharmaceutical Association (APhA), held in Detroit from March 28 to April 2, 1965. At the conference, Vice-President Hubert H. Humphrey, a pharmacist, received the Hugo H. Schaefer Medal "for outstanding leadership and service to the profession of pharmacy." K.K. Chen, a physician and pharmacist who introduced ephedrine into modern Occidental medicine, was the 1965 APhA Remington Honor Medalist.

A ribbon-cutting ceremony introduced the APhA Pharmaceutical Center to the delegates. (See also MEDICINE.)

WILLIAM S. APPLE
Executive Director
American Pharmaceutical Association

EARTHQUAKES

Earthquakes occurred in widely separated regions during 1965. The most damaging quake of the year killed 400 persons in Chile. In the United States, earthquakes hit the Seattle and Aleutian Islands areas. Work continued on efforts to predict the occurence of earthquakes.

Chile. The quake in Chile occurred on March 28. In addition to killing 400 persons, this quake, which had a magnitude of 7.75 on the Richter scale, caused extensive property damage in the central part of the country. The epicenter was at 32.4°S, 71.2°W, off the coast of central Chile.

Chile also was shaken by a shock of magnitude 7.0 on February 23. Its epicenter was at 25.7°S, 70.5°W. The quake caused heavy damage in northern Chile, but only one person was killed.

United States. Seattle was struck by a quake of magnitude 7.0 on April 29. The quake was centered in Puget Sound about 15 miles south of the city. Two persons were killed, and there was moderate property damage in the area. The quake was felt throughout Oregon, Idaho, Montana, and British Columbia.

Many visitors at the New York World's Fair watched a chart recorder while the quake was occurring. The recorder was connected to one of the seismometers in the Fordham University seismic vault.

A quake of magnitude 8.0 struck the Aleutian Islands on February 4. The chief damage was done by the tsunami, or sea wave, generated by the quake. A 35-foot wave struck part of Shemya Island, but the damage to the U.S. Air Force station there was slight. In the first 24 days after the quake, 750 aftershocks were recorded, and 21 of them had a magnitude of about 6.0.

Greece. Several shocks struck the Aegean Sea region in March and April. A shock on March 9 killed two persons and caused heavy damage on Alonissos Island. A seismic sea wave hit Pelagos and Skiathos Islands. A shock on March 31 killed three persons and caused extensive damage in Patras and Agrinion. This shock, which had a magnitude of 6.75, was felt in southern Italy. The most destructive shock, although only of magnitude 5.5, killed 19 persons and destroyed 2,000 homes in central Peloponnesus on April 5. This shock was centered at 37.7°N, 21.8°E. Greece was hit again by a quake on June 6. This quake had a magnitude of 6.0 and was centered at 38.7°N, 22.6°E. Only one person was killed, but there was considerable property damage in northern Peloponnesus.

El Salvador. On May 3 a destructive quake of magnitude 6.25 struck El Salvador; the epicenter was at 13.5°N, 89.3°W. At least 100 persons were killed, 500 were injured, and 7,000 were made homeless. A UNESCO reconnaissance mission was sent to the scene at once. The group brought back valuable information that will aid its efforts to lessen damage in seismic areas. The UNESCO group found that the vibrations had been building up since early February, when about 600 minor shocks were recorded daily. Most modern buildings withstood the shock, but buildings on less solid soil were damaged.

Other Countries. A series of shocks hit Algeria on January 1. The epicenter of the main shock was at 35.7°N, 4.4°E. Although the magnitude of the quake was only 5.5, four persons were killed and 40 were injured, and there was extensive property damage at M'Sila.

UPI

EARTHQUAKE shook Greece on April 5, killing 19 persons and shattering 2,000 homes, including this one in Arcadia.

A much larger quake of magnitude 7.5 occurred in Indonesia on January 24; the epicenter of the quake was at 2.4°S, 126.0°E. At least 40 persons were killed on Sanana Island, and there was extensive damage. A subsequent sea wave destroyed 90% of the town of Sanana and caused minor damage on Buru Island.

A quake hit Oaxaca, Mexico, on August 23. One person was killed in Oaxaca, and five were killed in Mexico City. This quake, which had a magnitude of 7.5, was felt throughout southern Mexico.

Seismic Research. The U.S. government continues to be the most generous supporter of seismic research. During 1965, $137,000,000 was allocated for a program to increase man's ability to predict the occurrence of earthquakes. There is as yet little hope of any general prediction of earthquakes, but progress is being made. For example, the Puget Sound quake of April 29 was better understood because modern seismic equipment had been installed in Seattle in 1949. The equipment records gave a much clearer picture of the seismicity of the region. Within a year after installation, 77 earthquakes were recorded in the Seattle region.

This pinpointing of the focal points of developing strain in seismic regions will greatly help the effort to obtain a partial prediction of earthquakes.

J. Joseph Lynch, S.J.
Director, Fordham U. Seismic Observatory

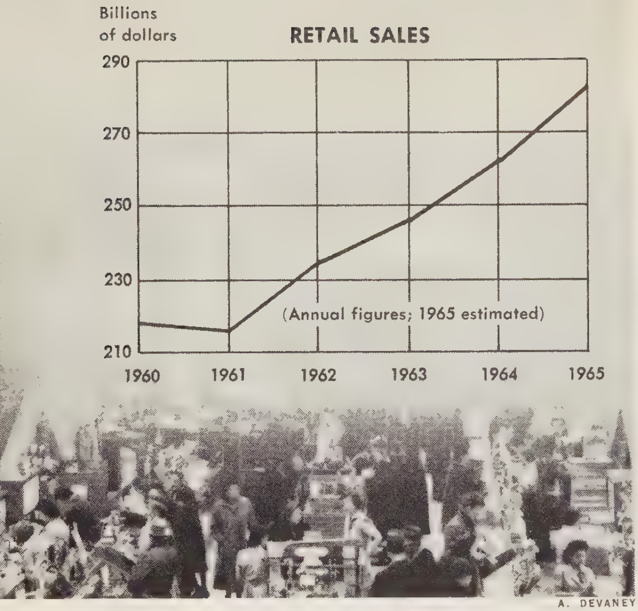
EASTERN ORTHODOX CHURCHES. See Religion—*Eastern Orthodoxy.*

ECLIPSES. See Astronomy.

ECONOMIC AND SOCIAL COUNCIL (UN). See United Nations.

ECONOMIC REVIEW, U.S.

The United States economy registered strong gains in 1965, continuing the unprecedented upsurge that began nearly five years earlier. As the year ended, business expansion passed its 58th month, and indicators of economic performance stood at or near new highs. (On December 5, the Federal Reserve Board acted to "tighten" the flow of money by raising the loan discount rate to member banks from 4% to 4½%—a move that the board said was designed "to



A. DEVANEY

reinforce efforts to maintain price stability and thus to foster balance in the economy's growth.") A tone of confidence prevailed during most of 1965, and the general feeling was that the favorable business climate would continue into 1966. Scattered problems remained in the economy, including geographic and racial pockets of poverty, but these were receiving continuing attention.

Lower taxes, easy credit, a steelmaking boom, and defense spending added impetus to the economy. In 1965 the second installment of the income tax rate reduction (passed in 1964) added to the disposable income of consumers and business, as did a reduction in a variety of excise taxes. Governmental monetary policy continued to make credit readily available, and to encourage consumer borrowing and business capital expansion.

Postponement of a steel strike deadline from April 1 to September 1 pushed up steel production throughout the summer. During this period, steel inventories were expanded in anticipation of a strike that never came. In addition, the acceleration of U.S. military activities in Vietnam stepped up defense spending.

Measuring the Economy. During the year the U.S. Department of Commerce made a basic revision of the national income and product accounts, going back on an annual basis to 1929 to apply new information and statistical techniques. One result was to show the current boom to be even stronger than had been thought. On the revised basis, the 1964 gross national product (GNP), or total output of goods and services, rounded out at $629 billion, up 6.8% from the revised level of the preceding year. The GNP for 1965 exceeded the $670 billion level, gaining about $10 billion in each quarter for an overall rise of more than 6.5%—again indicating the strong growth rate of the economy.

Not all sectors of the economy, however, advanced upward smoothly and steadily. As measured by the Federal Reserve Board's industrial production index (1957–59 = 100), industrial output increased irregularly from 138 in December 1964 to 144 in July and August. In September, after a steel contract settlement removed the pressure on steel purchasers to accumulate inventory, the index dropped off a point to 143, where it floundered temporarily. But as the excess steel stocks were worked off, the index started back up, and the industrial sector as a whole expanded its output.

Steel and Automobile Industries. Even with its irregular performance, steel approached a production record in 1965. Heavy production schedules over the first three quarters pushed output well ahead of the comparable period in 1964, and despite the fourth-quarter drop, the year's output ran impressively high.

The automobile industry performed at a record-production pace in 1965. Assemblies of passenger cars totaled about 9.3 million new units—an all-time high that easily exceeded the 1955 record by 1.4 million units. The high level of demand continued as the 1966 models received an enthusiastic reception when introduced on the market in the fall, and the industry felt that another 9-million-unit production year lay ahead in 1966.

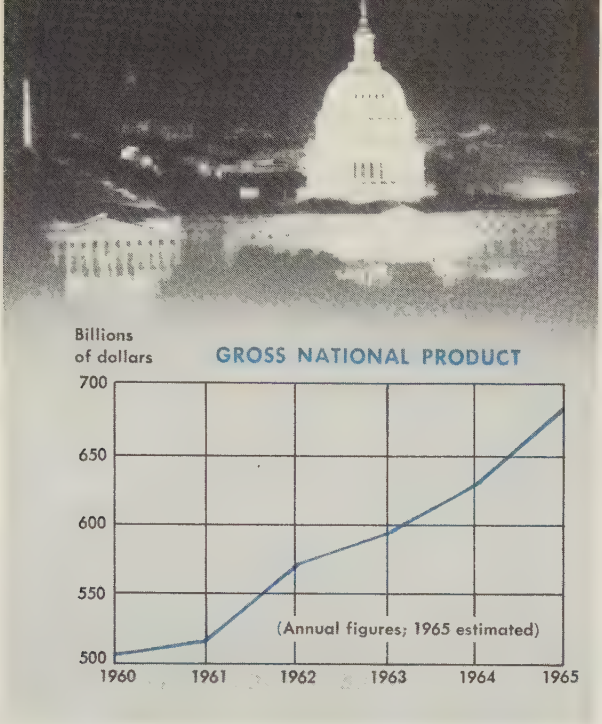
Inventories and Income. Manufacturers' sales ran at high levels throughout the year, and, except for the steel buildup prior to contract settlement, inventories were kept well under control. The ratio of inventories to sales remained at levels that have been customary in the past few years and that generally are regarded as conservative. Retail sales rose steadily except for a slight dip in the third quarter, when the pace in automobile sales became unsustainable. Retailers ended the year with the highest level of Christmas-season sales in history.

Consumers' ebullience was fortified by rising personal income, which pushed on to successive records most months of the year. Increased monthly Social Security benefits, as well as a large retroactive payment, helped lift consumer spending in the latter part of the year.

Corporate profits, both before and after taxes, surged to record levels in 1965 as a result of strong demand and high sales volume. After-tax profits were particularly impressive, reflecting favorable reductions in income tax rates, and pushed the stock market averages to new highs in May, November, and December. As the year wore on, however, questions arose increasingly as to the nation's economic ability to continue to boost profits. Productivity increases were threatened by stepped-up reliance on marginal plants and by the incipient scarcity of labor skills. But the high level of profits added to business confidence, and business capital spending showed further gains, rising to a record $50.9 billion for the year—a gain of 13% over 1964. This strong increase provided a major stimulant to the overall performance of the economy. Other economic developments included a favorable year for the agricultural sector of the economy as a whole.

Trouble Spots. Some problems, however, appeared in the economy. Residential nonfarm construction proved to be a lackluster performer, and showed little or no improvement in volume over 1964. The U.S. balance-of-payments problem persisted, even though it improved in the first half of the year. The first balance-of-payments surplus since 1957 was registered in the second quarter of 1965. It was generally expected, however, that deterioration in the latter half would produce another deficit, and that the year as a whole would show that the problem has not yet been solved.

Employment advanced to a record high, and the unemployment rate declined significantly. By the middle of December 1965, the unemployment rate had dropped from 5% (seasonally adjusted) at the end of 1964 to 4.1% of the labor force—the lowest level achieved in nine years. Some observers pointed



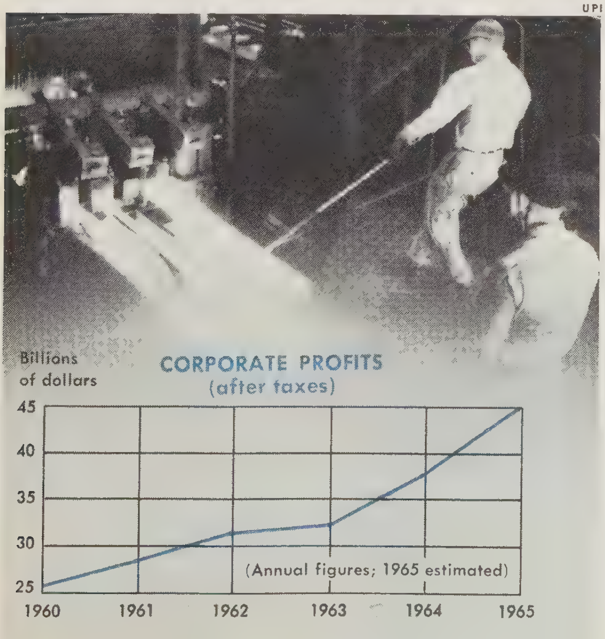
VICTOR KELLEY: PIX

out that this residue includes people waiting between jobs, workers without necessary skills, and others unemployable for a variety of reasons.

On the positive side of the employment picture, the ability of the economy to absorb the increasing numbers of workers entering the labor force represented an achievement in itself. This development dispelled some of the gloom arising from the rapid advance of automation. It has become increasingly obvious that adequate training and development of the proper kind of skills will provide an individual with a place in the economic scene.

Outlook. Coming as it did after nearly four years of rising business trends, the record-setting economic performance of 1965 created much optimism. Earlier, as the upsurge approached post-World War II records in the length of time it has continued, many observers felt that a downturn would come at any time. This feeling eased in 1965, and attention turned to more basic factors. The most optimistic observers believed that the U.S. economy had entered a new era, that business cycles can be controlled, and that the upgrading of living standards for all can now be undertaken. Because of the great length of the prosperity, some observers even felt that the U.S. economy had achieved a basic stability and a growth pattern that represent just about the maximum degree of success regarded as obtainable by most of the world's economists.

UPI



More pessimistic observers pointed to persistent unsolved problems. They noted that the balance-of-payments problem, rising wage levels, continued use of easy credit, and the pushing of production to capacity levels could lead to steps to choke off the growth or to inflation itself. The middle position seemed to be that 1965 could be documented statistically as an excellent year, and that the favorable trends were likely to continue into 1966. (See also AGRICULTURE; BANKING; CONSUMER CREDIT; COST OF LIVING; FOREIGN INVESTMENTS; INCOME; INTERNATIONAL FINANCE; INTERNATIONAL TRADE; RETAIL STORE SALES; STOCKS AND BONDS; WHOLESALE SELLING.)

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ECONOMICS. See BANKING; CONSUMER CREDIT; COST OF LIVING; ECONOMIC REVIEW; FOREIGN INVESTMENTS; INCOME; RETAIL STORE SALES; WHOLESALE SELLING.

ECUADOR

Ecuador's four-man military junta, in power since 1963, weathered a political crisis in 1965. Violent reaction to the junta's delays in turning over its authority to an elected government forced a cabinet change in July. A member of the junta, Air Force Col. Guillermo Freile Posso, was arrested for "his disloyalty in engaging in personal political adventures."

The country's generally stable economy was threatened by the loss of some foreign markets for bananas, Ecuador's major export crop.

Political Crisis. The junta's reluctance to transfer authority to an elected civilian government caused the country's numerous opposition factions to unite in protest in July. Rioting and terrorist activity broke out in Quito and Guayaquil, but the army and police put down the disturbances. Guayaquil was placed under martial law, and scores of opposition leaders, including former President Camilio Ponce Enríquez, were arrested.

Ecuador's nine-man cabinet, dominated by military officers, resigned on July 17 to allow the junta to name a new, predominantly civilian cabinet. The government, however, refused to comply with opposition demands to reschedule the presidential election planned for July 1966.

Colonel Freile Posso was placed under arrest on November 29. He allegedly had attempted to appoint his military aides to important government posts, and the move was interpreted by other members of the junta as being contrary to their policy of preparing the country for civilian rule.

Economy. A continuing decrease in Ecuador's banana exports since 1964 troubled the nation's economy. In addition, as a result of an anticipated

ECUADOR · Information Highlights

N. AMERICA
S. AMERICA

Area: 104,506 square miles.
Population: 5,084,000 (July 1, 1965, est.).
Chief Cities (1962 prelim. census): Quito, the capital, 355,183; Guayaquil, 510,785; Cuenca, 60,817; Ambato, 53,745.
Government: *Chairman of the Military Junta,* Rear Adm. Ramón Castro Jijón.
Religious Faiths: Roman Catholics, 94% of population; others, 6%.
Education: *Literacy rate* (1962)—67% of the population aged 15 and over. *Total school enrollment* (1962)—751,898 (primary, 654,278; secondary, 49,164; teacher-training, 9,458; technical, 27,963; higher, 11,035).
Finance (1964 est.): *Revenues,* $106,000,000; *expenditures,* $148,000,000; *public debt* (1963), $156,000,000; *monetary unit,* sucre (18.18 sucres equal U.S.$1).
Gross National Product (1964): $1,021,000,000.
National Income (1964): $866,000,000; average annual income per person, $177.
Economic Index: Cost of living (1964), 120 (1958=100).
Manufacturing (metric tons): Cement (1964), 288,000; sugar (1964), 226,000; gasoline (1963), 215,000; wheat flour (1960), 51,000; cotton yarn (1962), 500; wool yarn (1962), 100; lumber (1963), 343,000 cubic meters.
Crops (metric tons, 1964–65 crop year): Bananas (1963–64), 3,300,000 (ranks 2nd among world producers); citrus fruits, 182,000 (world rank, 17th); coffee, 48,000 (world rank, 16th); cocoa beans, 39,000 (world rank, 7th); cassava (1963–64), 189,000; rice, 167,000; maize, 124,000; barley, 81,000; onions (1963–64), 83,000; cottonseed (1963–64), 9,000; lentils (1963–64), 3,000.
Minerals (metric tons, 1964): Crude petroleum, 2,796,000 barrels; salt, 35,000; kaolin, 207; copper, 184; lead, 139; silver, 117,126 troy ounces; gold, 16,905 troy ounces; zinc concentrates (1963), 358; sulfur (1963), 203.
Foreign Trade (1964): *Exports* $147,800,000 (chief exports: bananas, $84,200,000; coffee, $21,700,000; cacao, $15,400,000; rice, $1,100,000); *imports,* $147,900,000 (chief imports, 1962: machinery and transport equipment, $29,686,000; manufactured goods, $24,348,000; chemicals, $13,208,000). *Chief trading partners* (1963): U.S. (took 56% of exports, supplied 47% of imports); West Germany (took 11% of exports, supplied 11% of imports); Japan (took 11% of exports, supplied 4% of imports).
Transportation: *Roads* (1964), 4,493 miles (919 paved); *motor vehicles* (1964), 38,852 (automobiles, 28,561); *railways* (1963), 615 miles; *merchant vessels* (1964), 6 (22,000 gross registered tons); *airlines* (1965), 8 international airlines; *principal airports,* Guayaquil, Quito.
Communications: *Telephones* (1964), 44,087; *television stations* (1964), 2; *television sets* (1964), 8,000; *radios* (1961), 175,000; *newspapers* (1962), 27.

increase in import duties, Ecuador's imports for the first three months of 1965 were 20% higher than in the same period of 1964. The combination of falling exports and rising imports upset the balance of trade.

The "banana crisis" was caused partly by increased competition for foreign markets. For example, Japan, formerly one of Ecuador's best customers, has been buying more bananas from Taiwan in recent years. Ecuador tried to compensate for such losses by increasing exports of dehydrated bananas and by producing more cocoa, coffee, and pyretherum.

The increase in import duties, which went into effect in May, caused riots and strikes in Guayaquil, Ecuador's major port city. The government later canceled the import tax rise.

The balance of trade problem failed to affect the value of the sucre, the Ecuadorian monetary unit, which has been relatively stable since 1961. This basic financial stability is due to a previous balance of trade surplus that has existed since 1962 and to Ecuador's strong international reserves. The reserves, however, dropped from a 1964 peak of $51 million to $40 million by May 1965.

In recent years, Ecuador's gross national product has increased at an annual average of 5%. Inflation was controlled, and the consumer price index has increased only 4% yearly since 1960.

Development Plan. Ecuador's ten-year development plan (1964–73) was approved in 1965 by the advisory body of the Alliance for Progress. The plan, to cost an estimated $2.5 billion, will encourage development in private housing, transportation, manufacturing, agriculture, education, and welfare. After the plan was approved, a group representing 19 countries expressed interest in providing $173 million for 40 Ecuadorian industrial and agricultural projects. Ecuador hoped to invest $147 million in the plan.

Agricultural Reform. Steps were taken in 1965 to implement the agricultural-reform program promulgated in July 1964. In Morona-Santiago state, 297 square miles of land were divided among 2,500 families. New coffee and banana plantations in Santo Domingo de los Caballeros attracted over 2,000 landless peasants. In other areas, however, land-reform lagged. A total of 8,649 acres was distributed to 12,500 peasants in 1964 and 1965.

Education. In a massive effort to combat illiteracy, Ecuador spent 390 million sucres on education in 1964, the largest budget item. Adult education was extended in 1965, and many new rural schools were being built.

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UPI

ECUADORIAN SOLDIERS guard two students from the University of Guayaquil, arrested for taking part in demonstrations against the country's military junta in July.

EDUCATION

OFFICE OF ECONOMIC OPPORTUNITY

GOVERNMENT ACTION to help children was a keynote of American education in 1965. Project Head Start prepared disadvantaged children to enter elementary school.

EDUCATION

The year 1965 was a record-breaking period for American education. School and college enrollments increased for the 21st consecutive year, reaching an estimated total of 54,200,000 in the fall. The schools and colleges were staffed by 2,300,000 teachers and 154,000 administrators. Thus approximately 56,654,000 Americans—about 29% of the population—were directly involved in education. The nation spent a record total of $39 billion on education in the 1964–65 school year, and education was described as the number one domestic enterprise.

Increasing sums of money for schools and colleges were supplied by the federal government, with the 89th Congress surpassing the 88th in voting aid to education. Federal support was stimulated by President Lyndon B. Johnson, who spoke of education as "central to the purposes of this administration and at the core of our hopes for a Great Society."

Federal Aid to Elementary and Secondary Education. The enactment by the Congress in April of the Elementary and Secondary Education Act of 1965 marked a historic breakthrough in federal aid to education. Government aid on a broad base had been blocked for years by congressional fear of federal control and, more recently, a division of opinion on aiding parochial schools. The 1965 act met the latter problem by authorizing aid for children attending both public and parochial schools but providing for control of expenditures by public agencies.

Under Title I of the act, over $1 billion of the $1.3 billion authorized for the first year of the program was earmarked for children in schools serving low-income families. The money could be used to hire additional teachers and administrators, construct facilities, and acquire equipment, but not to reduce local support of education.

Title II authorized an allotment of $100 million for additional school library books and equipment, textbooks, and other instructional materials.

Title III authorized $100 million for supplementary educational services, such as guidance and counseling, remedial reading, enriched academic courses, educational television, and school health.

Title IV amended the Cooperative Research Act, under which only $16 million was allocated for the fiscal year 1965, to authorize $100 million over the next five years for the construction and expansion of national and regional research facilities.

Title V authorized $25 million for a variety of programs and projects designed to improve the effectiveness of state departments of education.

Federal Aid to Higher Education. In its closing days the 89th Congress gave final approval to the $2.3 billion Higher Education Act of 1965. Described as "landmark legislation," the new bill set up the first federal scholarships, earmarked for exceptionally needy and highly capable students. An annual appropriation of $70 million for the next three years was authorized for "educational opportunity grants." With an average award of $500 anticipated, 140,000 scholarships would thus be made available each year.

Despite considerable opposition, the bill included authorization for a National Teachers Corps of about 6,000 teachers for schools in poverty-stricken areas. Recruits would be subsidized by federal funds, but their pay would be channeled through local school authorities. Teachers would be sent only to schools requesting them. The bill authorized $36.1 million for the first year and $64.7 million for the second. However, Congress adjourned without having appropriated funds for the corps.

Other innovations in the Higher Education Act were: (1) The sum of $25 million was authorized for a one-year program to strengthen developing institutions, particularly small Negro colleges in the South, through faculty exchanges and teaching fellowships. (2) Federal aid amounting to $25 million in the first year and $50 million in the second and third years was authorized to help solve urban and suburban problems. These funds were to be used primarily for university extension services, with "urban agents" helping city-dwellers just as county agents have helped farm families for generations. (3) Sums of $40 million for the first year, $160 million for the second, and $275 million for the third were authorized to support a new program of fellowships for elementary and secondary teachers.

The bill also doubled the present $230 million authorization for construction grants to colleges, making $460 million in federal funds available.

Progress in Desegregation. When the 1964–65 school session ended—11 years after the Supreme Court banned segregation in public schools—only 2.25% of the 2,980,000 Negro school children in 11 Southern states were actually attending school with white children. However, when schools opened in September 1965, thousands of Negroes all across the South filed into previously all-white classrooms. As racial barriers fell in more and more school districts there was hardly a trace of the violent, bitter resistance of earlier years. In the space of a few months the percentage of Negro children in integrated schools more than doubled.

The surge in integration was attributable to one section of the Civil Rights Act of 1964. This law provided that, in order to share in federal funds earmarked for distribution to public schools in 1965, each school district had to state to the U.S. Office of Education its intention to comply with the order to integrate. At least four grades were to be desegregated in the 1965–66 session, and all grades by 1967.

By Sept. 26, 1965, only 77 of the 5,044 school districts in the Southern and border states had failed to submit desegregation plans. There were some areas of resistance in the Deep South where school districts made no effort to qualify for federal aid. However, a total of 4,719 school systems submitted integration plans that were accepted, and an additional 248 plans were under review in late 1965.

Integration gains in the fall of 1965 were impressive. In Mississippi, where only 57 Negroes attended four mixed schools in 1964–65, it was reported that scores of schools had integrated hundreds of Negroes. Alabama, which previously had enrolled only 101 Negroes in nine desegregated districts, had more than 1,000 Negroes in mixed schools in the fall term. In South Carolina, the number of Negro pupils jumped from 265 to about 3,000; in North Carolina, from 4,900 to about 8,000; and in Georgia, from 1,300 to several thousand. Almost every school district in Arkansas, Florida, Tennessee, Texas, and Virginia was desegregated.

However, much of this change represented token integration. The overwhelming majority of Negroes still attended all-Negro schools.

To comply with federal regulations, roughly one half of the Southern school districts adopted "freedom of choice" plans under which Negroes must designate the school they wish to attend. Many Negroes chose to stay in their present schools. Civil rights leaders charged that the plans place the burden of initiative upon the Negroes, who may have to contend with community pressures. The Office of Education may reconsider the acceptability of such plans before another school year begins.

Plight of Negro Teachers. Charges that Negro teachers were losing their jobs as desegregation closed all-Negro schools were heard in many states that had set the pace for integration. Instances of dismissals in North Carolina, Florida, Arkansas, Texas, and Virginia were cited by leaders of the National Association for the Advancement of Colored People. The National Education Association (NEA) reported 300 dismissals as a direct result of desegregation.

In June 1965, U.S. Commissioner of Education Francis Keppel distributed a memorandum to chief state school officers in which he cautioned against releasing Negro teachers "on a discriminatory basis." He made it clear that the statement of policies issued April 29, 1965, which implemented Title VI of the Civil Rights Act, requires planning for the desegregation of school faculties as well as student bodies.

Project Head Start. During the summer of 1965 some 500,000 regular teachers and volunteer workers took part in an eight-week program called Project Head Start, which was designed to prepare culturally deprived children for entrance into kindergarten or first grade. In 13,400 child-development centers in 2,500 U.S. communities, approximately 560,000 children from crowded, underprivileged homes were given close personal attention to build their confidence and give them emotional reassurance. The program included physical examinations, dental care, and free meals. Parents were counseled at home

UPI

INTEGRATION of schools was speeded in 1965, but many remained segregated. Negroes in Crawfordville, Ga., held a peaceful protest by trying to board all-white school buses. Demonstrators were restrained by the police but not placed under arrest.

about ways they might help their children when the critical time of starting school arrived.

The reception of the program exceeded all expectations. In Atlanta, 1,800 children appeared at project centers on opening day, and the number grew as the program continued. In New York City, 26,000 children attended 333 centers.

As part of the war on poverty, Project Head Start operated under Sargent Shriver's Office of Economic Opportunity. More than half of the cooperating communities were in the Southern or border states. A high proportion of the children were Negro, but the entire project was integrated. Federal contributions (90% of cost) totaled $85 million, or about $170 per child.

Late in August, President Johnson announced that in the fall the program would be placed on a year-round basis as a permanent part of the educational system. The entrance ages were lowered to accomodate children of three years and older. Facilities for an enrollment of 350,000 needy children were made available. (See also ANTI-POVERTY PROGRAM.)

White House Conference on Education. On July 20–21, 1965, 700 leaders in education, business, labor, and government assembled in Washington, D.C. at the invitation of President Johnson to exchange views on major problems in education. The president charged the conference to produce "an agenda for the nation's future course in education." The delegates, in general sessions and panel discussion groups, centered their attention on improving the quality of education, extending educational opportunities, educating for world responsibilities, and expanding higher education.

Observers were disappointed that the conference failed to produce the lively debate anticipated. The most controversial proposal was that federal testing of samples of students across the nation be used to assess accomplishments in specific regions and types of schools.

The New York *Times* (July 22, 1965) singled out the emergence of a new leadership in education as the most striking fact of the conference, citing such men as John W. Gardner, president of the Carnegie Corporation and chairman of the conference; Francis Keppel, U.S. commissioner of education; and James B. Conant, a leader in the movement to improve public schools and teacher training. Gardner earlier had served as head of the presidential task force that helped shape the administration's education program. A few days after the end of the conference, President Johnson announced the appointment of Gardner as secretary of health, education, and welfare. In December, Keppel was promoted to the post of assistant secretary and Harold Howe II was named the new commissioner of education.

UPI

STUDENT UNREST in colleges made headlines in 1965. Mario Savio led protests at California's Berkeley campus.

Improvements in the Schools. Despite segregation problems in the South, racial friction over busing of pupils in the North, and complaints about the curriculum and about teaching, many U.S. educators felt that schools had improved vastly. This feeling was revealed in interviews across the nation reported by *U.S. News and World Report* (Sept. 13, 1965).

Mentioned most frequently as evidence of improvement were programs in mathematics and science; the spread of team teaching; the use of educational television, teaching machines, and other aids to learning; the acceptance of the ungraded school; upgrading of vocational education; and the development of independent study and advanced placement programs in high schools.

Academic standards, many teachers reported, had gone up sharply in recent years. Some elementary schools were teaching foreign languages, and some high schools were offering courses in calculus and philosophy.

The school day and school session had been lengthened in many communities. Children were starting to school earlier.

The most modern programs, facilities, and equipment were found in schools serving the well-to-do

WIDE WORLD

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5-3-4
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DON'T MAKE Pawns OF OUR CHILDREN
HASTY
EMENTATION=
ANIZATION

REORGANIZATION plans for public schools produced controversies. In New York City pickets marched to protest against plans designed to hasten school integration.

UPI

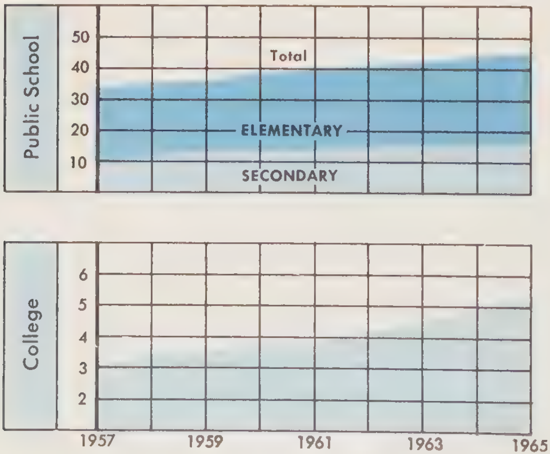
PRESIDENT JOHNSON signs history-making education bill on April 11. His first teacher, Mrs. Kate D. Loney, looks on.

residential suburbs of large and small cities. In many large cities, antiquated buildings, a shortage of teachers, and most of all the meager home backgrounds of many pupils resulted in low educational achievement. However, federal aid for urban education pointed the way to improving city schools.

Student Unrest in the Colleges. What *Time* magazine characterized as "a year of churning unrest on U.S. campuses" began in the fall of 1964 on the Berkeley campus of the University of California. The immediate cause of trouble was a ban by university authorities on student gatherings for political and social causes in a formerly exempt area just outside the Sather Gate of the campus. To oppose the ban, some 20 student organizations formed a United Front coalition, later reorganized as the Free Speech Movement. The most prominent leader of the movement was Mario Savio, a senior philosophy major who later was suspended by the university. A substantial number of nonstudents living near the university took an active part in the controversy.

Unrest continued to grow, in spite of the efforts of the regents and administrative officers to cope with the situation. Events reached a climax on Dec. 3, 1964, when Governor Edmund G. Brown ordered some 600 police to break up a massive sit-in staged by students in the administration building, Sproul Hall. Nearly 800 young men and women were arrested. Efforts to settle the controversy continued into the spring of 1965. A faculty committee was helpful in reconciling the issues between students and the administration. The regents and administration agreed not to punish the arrested students, and expressed their willingness to confer with students and faculty about campus rules and regulations. Discussions superseded demonstrations.

COLLEGE AND PUBLIC SCHOOL ENROLLMENTS



Source: U.S. Department of Health, Education, and Welfare and National Education Association.

Various reasons were assigned for the wave of student unrest that engulfed Berkeley and other campuses. The very size of the modern university—27,000 students at the Berkeley campus, for example—and the impersonality of the entire educational process were frequently cited. It was alleged that universities have become research centers, so concerned with government contracts and service activities that they give only passing attention to students. The gulf between faculty and students has widened, particularly in the "multiversities" where little personal contact is possible.

Many of the numerous articles and books dealing with unrest in the colleges pointed to growing student interest in social and political problems. The political and social apathy so much noted among the nation's college students in the 1950's was succeeded by a concern for social justice. Interest in civil rights led not only to demonstrations but also to active service in the cause of voter registration, instruction of disadvantaged youth, and other voluntary endeavors during vacation periods. Some students applied the tactics of political activism to campus problems.

College and university authorities tried various means to improve relations with students. Many large universities made particular efforts to get faculty and students into a closer relationship and to improve channels of communication linking administration, faculty, and students. Several universities, including Yale and Cornell, introduced the policy of using student ratings of teaching performance as one factor in deciding faculty promotions. In many ways, colleges allowed students increased freedom and influence. College administrators urged that students use their new opportunities with a strong sense of responsibility.

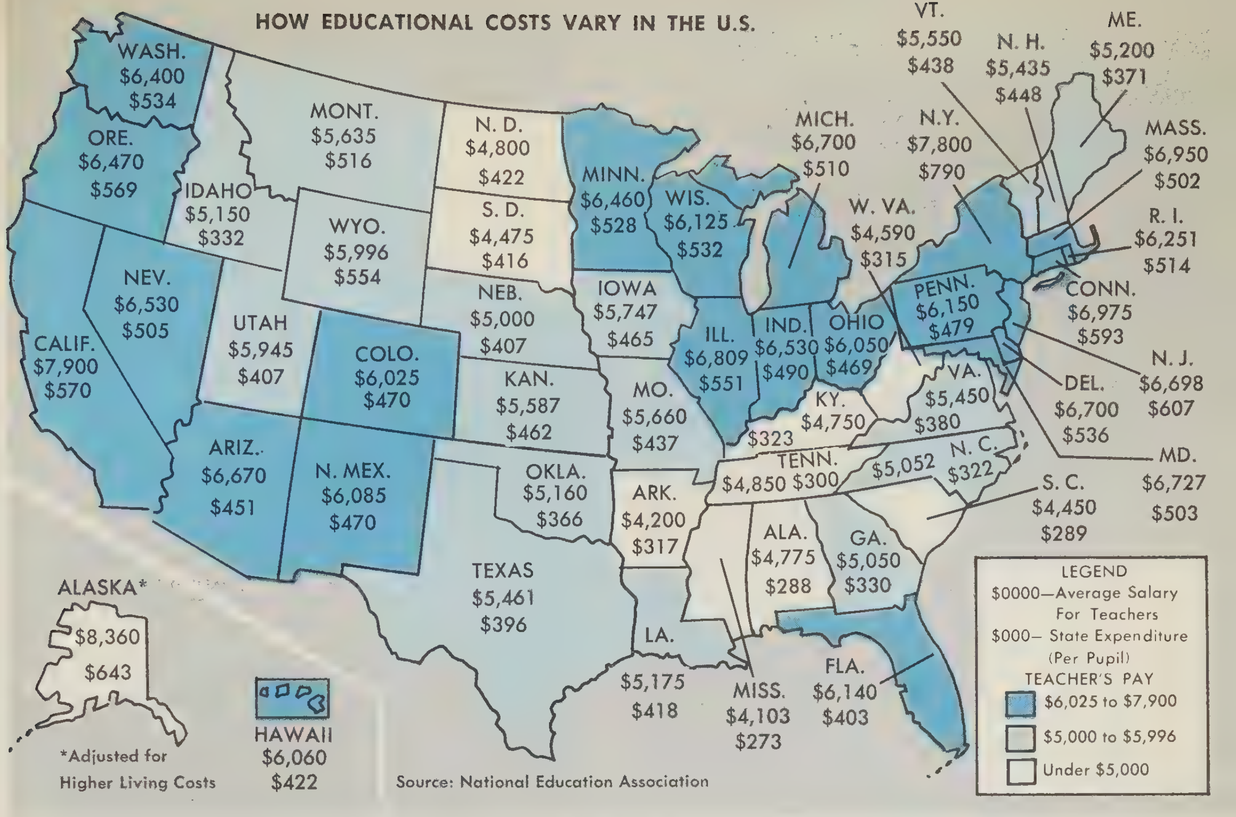
Arts-Humanities Foundation. The 89th Congress established two national endowments, one for the arts and one for the humanities. Each had a chairman and a national advisory committee, and received an authorization of $5 million per year for 1966, 1967, and 1968. Funds were to be used to promote creative endeavor, scholarship, and teaching in the arts and the humanities, doing for these fields what the National Science Foundation has done for the sciences. A Federal Council on the Arts and Humanities was created to coordinate the activities of the two endowments.

Elementary and Secondary Enrollments. Secondary enrollments remained about the same as in 1964–65 (12,900,000), while the number of elementary students increased 1.1% (to 35,900,000).

Nonpublic school enrollments, which are included in the above estimates, increased in about the same proportion, with 5,400,000 boys and girls enrolled in private elementary schools and 1,400,000 in private high schools in 1965–66.

A record number of 2,700,000 high school graduates was reported for 1964–65, an increase of 400,000 over the preceding year. About half of them entered college in the fall.

School Teaching Staffs. In 1965–66 the public and private schools of the United States had 1,931,000 teachers, an increase of 1.5% from the previous year,


HOW EDUCATIONAL COSTS VARY IN THE U.S.

WASH. $6,400 $534
ORE. $6,470 $569
IDAHO $5,150 $332
MONT. $5,635 $516
N. D. $4,800 $422
S. D. $4,475 $416
WYO. $5,996 $554
NEB. $5,000 $407
MINN. $6,460 $528
WIS. $6,125 $532
MICH. $6,700 $510
N.Y. $7,800 $790
VT. $5,550 $438
N. H. $5,435 $448
ME. $5,200 $371
MASS. $6,950 $502
R. I. $6,251 $514
CONN. $6,975 $593
N. J. $6,698 $607
DEL. $6,700 $536
MD. $6,727 $503
W. VA. $4,590 $315
PENN. $6,150 $479
OHIO $6,050 $469
IND. $6,530 $490
ILL. $6,809 $551
IOWA $5,747 $465
NEV. $6,530 $505
CALIF. $7,900 $570
UTAH $5,945 $407
COLO. $6,025 $470
KAN. $5,587 $462
MO. $5,660 $437
KY. $4,750 $323
VA. $5,450 $380
N. C. $5,052 $322
TENN. $4,850 $300
S. C. $4,450 $289
ARIZ. $6,670 $451
N. MEX. $6,085 $470
OKLA. $5,160 $366
ARK. $4,200 $317
ALA. $4,775 $288
GA. $5,050 $330
TEXAS $5,461 $396
LA. $5,175 $418
MISS. $4,103 $273
FLA. $6,140 $403
ALASKA* $8,360 $643
HAWAII $6,060 $422
*Adjusted for Higher Living Costs
LEGEND
$0000—Average Salary For Teachers
$000— State Expenditure (Per Pupil)
TEACHER'S PAY
$6,025 to $7,900
$5,000 to $5,996
Under $5,000

Source: National Education Association

according to Office of Education estimates. Of the 1,128,000 elementary teachers, 971,000 were in public schools and 157,000 in nonpublic schools; of the 803,000 high school teachers, 720,000 were in public schools and 83,000 in nonpublic schools.

The average annual salary of classroom teachers in 1964–65 was $6,220; of all instructional personnel, $6,400.

The number of college graduates prepared for teaching increased from 174,133 in 1964 to 191,391 in 1965—a gain of 9.9%, according to the National Education Association. However, the number prepared for elementary school teaching increased only 3.3%, while the high school supply increased 14.6%. There were 250,000 more elementary positions than high school positions to be staffed; yet three out of five graduates were prepared for high school teaching. The imbalance resulted in a continuing shortage of qualified elementary teachers.

At the high school level the chief problem was the distribution of teachers among major teaching fields. Some, such as social science and men's physical education, had an oversupply, while others, such as science and mathematics, suffered from shortages.

School Buildings. An average of 71,000 new classrooms were constructed annually between 1955 and 1964. In the latter year, expenditures for school construction reached $3,260,000,000—an all-time high. Despite this building boom, 78,000 more classrooms were needed in 1965 to eliminate off-site nonpermanent and improvised facilities. An Office of Education survey estimated that more than 1 million pupils were attending classes in buildings with extensive structural defects. An additional 107,000 new classrooms were needed to maintain the current ratio of approximately 27.5 pupils per room.

College Enrollment Trends. In 1965–66, colleges and universities experienced the full impact of the increased enrollments predicted a decade earlier. The percentage of young people of college age (18 to 21 years) actually enrolled reached 43%, with predictions that by 1980 it would reach 60%. Even this figure may be conservative. In California, 81% of the college-age population was attending college in 1965–66.

Of the 5,435,000 college students enrolled in the fall of 1965, 3,519,000 were in public institutions and 1,916,000 in private institutions. Final statistics show that in the decade 1954–64 enrollment in higher education doubled. However, the increase in public institutions was 134%, or more than twice the 62% increase in private institutions. 'A substantial part of this increase has come through the spread of junior or community colleges, which in 1965 had an estimated enrollment of 791,000, representing an increase of 80,000 in a single year. There were 710 junior colleges by June 1965, with 20 to 30 new ones opening each year. California alone had nearly 80 junior or community colleges.

With demands for admission far exceeding facilities, many colleges expanded their classrooms and dormitories as fast as their funds would allow. Hundreds of millions of dollars worth of new construction, made possible largely by the Higher Education Facilities Act of 1963, was under way. In the year ended June 30, 1965, 516 federal grants totaling $224,362,675 were made to 451 institutions for undergraduate facilities, such as classrooms, libraries, and science buildings. An additional $107,706,000 went to 127 schools in the form of loans. Additional billions in federal funds were authorized by the Higher Education Act of 1965. (For a selected list of colleges and universities in the United States and Canada, see COLLEGES AND UNIVERSITIES.)

College Teaching Staffs. In 1965–66 the higher education instructional staff for resident degree-credit courses totaled 415,000, according to Office of Education estimates. The figure represented an increase of 8.1% over 1964–65. Approximately 229,000 teachers were employed in public colleges and universities, and 186,000 in nonpublic institutions.

Student Aid. In the 1963–64 school year, 1,852 institutions awarded over $331 million to students in the form of scholarships, service grants, loans, and employment—an increase of 57% in four years. Many institutions made a "package award," combining loans, scholarshops, and job aid. By type of assistance, scholarships and service grants totaled $163 million; student employment, $144.6 million; and loans, $23.8 million.

Private institutions enrolled only 36% of all students but awarded 55% of the total aid, according to the Office of Education.

In addition to the above types of institutional aid, the National Defense Student Loan program had loaned a total of $562 million to 885,000 undergraduate and graduate students as of June 30, 1964. In 1965, approved requests for funds from colleges and universities amounted to $137 million. For 1966, an appropriation of $186 million for NDS loans was requested. By June 30, 1965, $700 million in loans had been made available to 1 million students.

College Work-Study Program. The inauguration of the College Work-Study Program, designed to assist students whose parents have an annual income of $3,000 or less, helped many students pay their expenses. Through on-campus work activities, students could earn $1.25 an hour for up to 15 hours per week while attending classes, or a total of approximately $600 each for an academic year. National Defense Student Loan Funds were available to supplement earnings.

Degrees Conferred. A record number of college degrees was conferred in 1964, according to the Office of Education. Bachelor's and first professional degrees totaled 460,467, up 12% over the previous year. Almost one fourth were granted in education (112,503), with the social sciences (76,964) as the next most popular area of study. Master's degrees totaled 101,122, up 11%. About two fifths, 40,700, were in education. Doctorates increased 13%, totaling 14,490. The physical sciences led with 2,455, followed by education with 2,348.

The proportion of women obtaining degrees has varied but little for several years. In 1964 approximately 40% of the bachelor's degrees, 32% of the master's, and 11% of the doctorates went to women.

In 1965, according to the Office of Education, the number of degrees granted at all levels increased again. The estimated totals were: bachelor's and first professional, 525,000; master's, 111,000; and doctor's, 15,300.

International Exchange. In 1964–65, 82,045 foreign students were enrolled in American colleges and universities. This number represented an increase of nearly 10% over the preceding year, according to the Institute of International Education.

The Far East contributed 29,400 foreign students, or 36% of the total. Latin America sent 13,600 students, or 17% of the total, followed by the Middle East, with 11,200 (14%); Europe, with 10,100 (12%); North America, with 9,300 (11%); Africa, with 6,800 (8%); and Oceania, with 1,200 (2%).

In 1964–65, at least 20,000 Americans were studying abroad, mainly at European universities.

Expenditures for Education. The Office of Education reported that total expenditures for education at all levels, public and private, reached a new high of $39 billion in 1964–65, nearly three times the 1953–54 total of $13.9 billion. Expenditures for current operations and interest payments totaled $32.8 billion, of which $25.5 billion was for public education and $7.3 billion for private. Expenditures for capital outlay were $6.2 billion, of which $4.9 billion was for public education and $1.3 billion for private education. By level of schooling, $26.9 billion went for elementary and secondary education, and $12.1 billion for higher education.

The operating costs of America's colleges and universities, public and private, increased 28% between 1961–62 and 1963–64. Of the $9.2 billion spent in the latter session, $2.8 billion went for faculty salaries and other instructional costs, an increase of 25%. The second largest outlay was nearly $2 billion for organized research or large-scale separately budgeted projects, an increase of 33%. Financed largely with federal funds, the projects were mainly in the fields of health, agriculture, space exploration, and defense. They constituted 21% of the day-to-day costs of operation.

Education of the Population. In slightly more than a generation, the amount of schooling of the U.S. population increased by four full years, according to *American Education* (June 1965), the new monthly magazine of the Office of Education. Persons 65 and over had an average of 8½ years of school, while those between the ages of 25 and 29 had completed an average of 12½ years.

Edward Alvey, Jr.
Dean, Mary Washington College of the University of Virginia

EGYPT. See United Arab Republic.

EIRE. See Ireland.

UPI

NEW CAMPUS with trailers for dormitories was opened by the University of California at Santa Cruz in 1965. House trailers in star-shaped groups are quarters for 356 students while construction of permanent classrooms and dormitories is being completed.

WIDE WORLD

MAYORALTY ELECTIONS commanded much attention in a relatively quiet political year. Elliott Roosevelt (*above*), son of the late President Franklin D. Roosevelt, was elected mayor of Miami Beach, Fla., on June 1. Samuel W. Yorty (*below*) was reelected mayor of Los Angeles on April 7.

UPI

JOHN V. LINDSAY
FOR
MAYOR
Got a Gripe About New York?
PHONE THE JOHN LINDSAY GRIPE-LINE
661-6060

WIDE WORLD

JOHN V. LINDSAY, a progressive Republican supported by the Liberal Party and by a number of independent Democrats, was elected mayor of New York City on November 2.

ELECTIONS

Returns from scattered off-year elections in the United States in 1965 gave no indication of further shifts in popular support toward the Democratic party. Instead, they revealed that attractive candidates with well-organized campaigns can overturn established political arrangements, even in Democratic strongholds.

New York City. By far the most significant election result was the victory of John V. Lindsay in New York City's mayoralty contest on November 2. His defeat of the Democratic nominee, City Controller Abraham D. Beame, came about because of the disenchantment of most voters with uninspired Democratic leadership.

Lindsay, a liberal Republican member of Congress from Manhattan's so-called Silk Stocking district, announced his candidacy before Mayor Robert F. Wagner, a Democrat, said on June 10 that he would not seek reelection. Lindsay was endorsed by the Liberal party on June 28 by a vote of 800 to 50, and he was unopposed for the Republican nomination.

The Democratic primary on September 14 was marked by a factional struggle. Beame was supported by such entrenched party leaders as Charles A. Buckley of the Bronx, Stanley Steingut of Brooklyn, and Adam Clayton Powell of Harlem. His principal opponent, City Council President Paul Screvane, was supported by Mayor Wagner. Beame defeated Screvane by 327,934 to 268,991 votes.

In his campaign, Lindsay avoided the Republican label and refused to seek help from national party leaders. The acidly witty Conservative party candidate, William F. Buckley, Jr., hoped to secure the defeat of Lindsay, whom he did not regard as a true Republican. But Buckley also took conservative votes away from Beame. Vice President Hubert H. Humphrey and Senator Robert F. Kennedy (D, N.Y.) campaigned for Beame, but President Johnson delayed an endorsement until October 29.

Election returns gave Lindsay 1,156,915 votes, nearly 46% of the total. Beame received 1,030,771, and Buckley, 339,137. Lindsay cut heavily into Democratic expectations among reform-minded voters within the Negro, Jewish, and other communities.

State Elections. In New Jersey, Governor Richard J. Hughes, a Democrat, was reelected November 2 over Republican Wayne Dumont, who had developed a conservative image partly as a result of his demand that Rutgers University dismiss Professor Eugene D. Genovese because Genovese expressed the hope that the Vietcong would win the war in Vietnam. Hughes carried 16 of New Jersey's 21 counties, and Democrats won control of both houses of the legislature for the first time since 1914.

Also on November 2, Virginia voters elected to the governorship Mills E. Godwin, a Democrat. The winner received 48% of the vote, as against 37.3% for A. Linwood Holton, Jr. (Republican), 13.7% for William J. Story (Conservative), and 1% for George Lincoln Rockwell (American Nazi). Godwin was supported by the Democratic organization, headed by Senator Harry F. Byrd, Sr., and by large majorities of Negro and labor union voters.

In other state elections, New York Republicans regained control of the Senate, but Democrats retained a majority in the Assembly. An overwhelming vote sent former Senator Kenneth Keating, a Republican, to the Court of Appeals, the state's highest court. New York voters approved $1 billion in bonds for water pollution control and a state constitutional convention for 1967, but rejected proposals for low-income housing and longer legislative terms.

In Kentucky, voters gave Democrats increased control of the legislature and approved $176 million in bonds for highways and buildings. In Florida, a $300 million highway bond issue was rejected, but in North Carolina that amount for highway bonds was approved. Ohio voters rejected an increase in the sales tax. A proposal for four-year terms for state officials in Texas was rejected despite strong support by Governor John B. Connally.

A plan for state legislative reapportionment in Ohio, opposed by Democratic and labor organizations, was rejected on May 5. In a Georgia election on June 16 for the state House of Representatives, which was reapportioned by federal court order, Democrats retained control, but 20 of the 49 Republican candidates were elected. Negro Democrats were elected in seven districts. A special election in Vermont on November 23, following reapportionment of both legislative chambers by federal court order, resulted in increased Republican control.

Other Elections. A hard-fought nonpartisan campaign for mayor of Los Angeles resulted in the reelection on April 6 of Samuel W. Yorty, who defeated Representative James Roosevelt and six other candidates. On June 1, Elliott Roosevelt, another son of former President Franklin D. Roosevelt, was elected mayor of Miami Beach, Fla.

On June 8, voters in Mississippi broke precedent by choosing Republican mayors in Hattiesburg and Columbus, and Republican officials in six towns.

In South Carolina, Albert W. Watson, who had joined the Republican party and resigned from Congress after Democrats in the House had voted to discipline him for supporting the 1964 Republican presidential ticket, was reelected by a 2 to 1 margin in a special congressional district election on June 15. In another congressional election, on November 2 in Ohio, Clarence J. Brown, Jr., won the seat previously held by his father, who died on Aug. 23, 1965.

In Philadelphia, Arlen Specter, formerly a Democrat, was elected district attorney as a Republican with much bipartisan support in a strongly Democratic city. In Cleveland, Democratic Mayor Ralph S. Locher was narrowly reelected over Carl B. Stokes, a Negro running as an independent Democrat. In Boston, Mrs. Louise Day Hicks, a staunch defender of neighborhood districts, was reelected to the school committee despite opposition by civil rights groups. In Louisville, broad support from Negroes helped Republicans retain the mayoralty. (See also POLITICAL PARTIES and articles on individual states and cities.)

FRANKLIN L. BURDETTE
Professor and Director, Bureau of Governmental Research, University of Maryland

ELECTRICAL INDUSTRIES

The importance of electric power to metropolitan areas was underlined on Nov. 9, 1965, when a blackout hit most of six northeastern states and Canada's Ontario Province, affecting about 30 million people. A huge surge of power flowed into the United States after an automatic protective device at a plant of the Ontario Hydroelectric Power Commission caused the disconnection of transmission lines from that plant into Canada. This, in turn, caused interruptions throughout most of the Canada-United States Eastern Interconnection.

The individual utility systems in the grid quickly took steps to make the possibility of recurrence remote. Protective measures included the strengthening of internal systems by the addition of equipment for quick restart of generators, and the improvement of interconnections with other companies so that each can be assured of drawing on its neighbors for emergency support. (See also FEDERAL POWER COMMISSION.)

More Atomic Power. By late 1965 there were 14 atomic power plants in operation in the United States, and two other projects had attained criticality—the ability to sustain a chain reaction. These 16 atomic power projects had a combined capacity of about 1.1 million kilowatts. An additional 14 atomic projects, with a total capacity of about 6.1 million kilowatts, were in various stages of construction, design, or planning for service by the late 1960's or early 1970's. Investor-owned electric utilities participated in 22 of the 30 projects, and also took part in the nine programs involving atomic research or development.

Record Output. A record production exceeding 1 trillion kilowatt-hours was registered by the total electric utility industry in the United States in the 12 months ended July 31, 1965. The total net electric power generation by investor-owned power companies, government-owned agencies, and rural electric cooperatives rose 6.6% above output in the previous 12-month period. The industry's total generating capacity reached a record 230.3 million kilowatts, representing a 6.1% increase in 12 months.

Investor-owned utilities provided most of the country's installed capacity, accounting for 76%

NEW CAPACITY IN EUROPEAN POWER PLANTS
SCHEDULED TO COME INTO SERVICE 1964–68

Country	Nuclear plants (megawatts)	Conventional fuel-burning plants (megawatts)	Hydroelectric plants (megawatts)
Austria	...	382	1,669
Belgium	130	1,541	21
Bulgaria	...	1,392	338
Cyprus	...	60	...
Czechoslovakia	150	3,963	85
Denmark[1]	...	1,100	...
Finland	...	430	340
France	1,148[1]	5,002	2,190[1]
Great Britain	3,580	21,988	494
Greece	...	328	588
Hungary	...	1,118	...
Iceland	...	14	9
Ireland	...	410	...
Italy	405	7,075	1,570
Luxembourg	...	...	300
Netherlands	...	3,194	...
Norway	...	...	3,043
Poland	...	3,217	172
Portugal	...	265[1]	311[1]
Rumania[2]	...	1,297	355
Spain	150	2,382	4,301
Sweden	10	844	1,797
Switzerland	8[3]	150	1,630
Turkey	...	332	291
West Germany	300	5,780	850
Yugoslavia[1]	...	1,226	1,304

[1] Public supply only. [2] Forecasts for period ending Dec. 31, 1965. [3] Gross electrical capacity. (Source: Economic Commission for Europe.)

UPI PHOTOS

WHEN THE LIGHTS WENT OUT, New York's glittering towers (*above*) became sombre silhouettes against the nighttime sky (*below*). On Nov. 9, 1965, an electrical power outage plunged large sections of the Northeastern states and parts of Canada into darkness, severely disrupting transportation and services.

at the beginning of 1965. Governmental agencies accounted for 23%, and rural electric cooperatives for 1%. Of the electric energy produced in the 12 months ended July 31, 1965, fuel-burning plants (including atomic plants) supplied 81.7%, and hydroelectric plants 18.3%.

Electric utilities added almost 1.5 million customers in the 12-month period, bringing the total number of customers to nearly 65 million. Residential customers comprised 87.7% of the total, or more than 57 million. Commercial and industrial customers made up another 11.9%, numbering more than 7.7 million. (The remaining customers included highway and rail systems and public authorities.) During the period, commercial and industrial customers purchased about 614.9 billion kilowatt-hours, an increase of more than 6%.

Residential customers purchased about 272.2 billion kw-hr, an increase of 19.6 billion over the preceding 12 months. The average residential customer used 4,823 kw-hr during the 12 months ended July 1965, or about 5.3% more than in the previous 12 months. He paid 2.28 cents per kw-hr, or about 2.1% less than a year earlier.

Largest Industry. Investor-owned electric utilities comprise the largest single industry in the United States. These companies had a total investment of nearly $57 billion in electric plants and equipment at the beginning of 1965, and spent $4 billion for new construction during the year. Electric utilities use more coal than any other American industry—more than 225 million tons in 1964, most of it from the Appalachia region.

In addition, electric utilities bought more than 100 million barrels of oil and more than 2,300 trillion cubic feet of natural gas.

Upsurge in Europe. World output of electric energy for 1965 was expected to total about 3 trillion kw-hr. In the United States, plans call for about doubling the nation's capacity in the next 10 years. In most European countries, plans for the 1964–1968 period call for building new power plants that will increase total capacity more than 50% above the 1963 level, according to a report of the Economic Commission for Europe. Atomic power plants represent 14% of the new capacity to be brought into service during that period in France and Britain. Conventionl fuel-burning plants were expected to account for 80%

or more of the new capacity in Britain, Belgium, Bulgaria, Cyprus, Czechoslovakia, Denmark, Hungary, Ireland, Netherlands, Poland, and West Germany. Hydroelectric stations were expected to account for all of the new capacity in Luxembourg and Norway, 91% in Switzerland, and 81% in Austria.

ELECTRIC POWER DATA FOR LEADING COUNTRIES

Country	1963 installed capacity (kw)	1963 production (kw-hr)	1963 production per capita (kw-hr)
United States	228,757,000	1,011,417,000,000	5,340
USSR	93,000,000	385,800,000,000	1,716
Great Britain	44,604,000	163,342,000,000	3,035
Japan[1]	34,351,000	155,416,000,000	1,621
West Germany	33,779,000	137,373,000,000	2,385
Canada	26,338,000	121,642,000,000	6,427
France	25,496,000	85,932,000,000	1,796
Italy	21,442,000	69,100,000,000	1,369
China, Communist	12,700,000	29,000,000,000	40
Sweden	11,187,000	39,966,000,000	5,256
East Germany	8,854,000	45,120,000,000	2,630
Poland	8,583,000	33,374,000,000	1,087
Spain	8,467,000	25,207,000,000	811
Norway	8,421,000	40,155,000,000	10,950
Switzerland[2]	7,691,000	22,013,000,000	3,789
Other countries	109,687,000	403,717,000,000	255
World total	683,357,000	2,768,574,000,000	882

[1] Year ended March 31, 1964. [2] Year ended Sept. 30, 1963. (Source: Federal Power Commission.)

PETER VAN NOTE
Associate Editor, Edison Electric Institute

ELECTRONICS

Factory sales of electronic products in the United States in 1965 amounted to $17 billion, or about $800 million greater than the 1964 total. Although sales to the government decreased, industrial and consumer sales increased sufficiently to provide greater total sales in 1965. The demand for electronic products for computer, process control, and instrumentation applications in industry was especially strong, as was the demand for color television sets by consumers. The continued rising demand for these sets resulted in parts shortages and slower deliveries.

According to the Electronic Industries Association, sales to the government totaled $9.185 billion (down 5.3%); sales to industries, $3.865 billion (up 11.1%); and sales to consumers, $3.335 billion (up 13.4%). Sales of replacement components amounted to $630 million.

Effects of the War in Vietnam. The stepped up fighting in Vietnam apparently resulted in a heavy increase in the production of standard and advanced communications systems.

By October 1965, the demands of the struggle in Vietnam apparently led to some adverse effects on the production of electronic equipment. In November the Martin Company reported that the quality of wires, connectors, and other materials it had received from suppliers had decreased alarmingly. Subsequently, other firms reported there was some laxity in the quality-control procedures of suppliers of materials. However, by the end of the year, most companies noted that quality itself was not the problem, but that copper shortages, longer time intervals between design and production, and slower deliveries were occurring. Delays were reported in deliveries of crystals and crystal filters, transformers, and capacitors.

Gemini Flights. The electronics industry received a big boost from the performance of electronic products carried by the Gemini spacecraft. During the flight of Gemini 3 on March 23, 29 of the 30 major electronic systems worked perfectly. Gemini 3 probably was the first spacecraft that had completely modular electronic systems and components. The flight also marked the first time that a communications link was established between a ground station, a satellite, and a manned spacecraft. When normal communications from tracking ships to the spacecraft had been lost temporarily, Gemini 3 received messages that were relayed from a ground station by the Syncom 3 satellite.

In June, experiment packages carried by Gemini 4 worked successfully. A proton-electron spectrometer measured radiation levels just outside the spacecraft, and a three-axis magnetometer measured the local magnitude and direction of the earth's magnetic field.

In August the Gemini 5 flight caused some tense moments when problems developed with the fuel cells and with ground and on-board computers. Nonetheless, experiment packages in the spacecraft obtained data that provided notable advances in celestial and space-object radiometry. The equipment for these measurements included a cryogenically cooled interferometer-spectrometer that gave superior performance in the infrared spectral region.

In December the two-week flight of Gemini 7 and the spectacular rendezvous of Gemini 6 and Gemini 7 provided stringent long-life tests of electronic systems in a space environment. The performance of the fuel cells, made by General Electric and Garrett AiResearch, exceeded expectations. The digital computer, manufactured by International Business Machines, and stabilized platform, made by Honeywell, that were used in orbital navigation maneuvers performed well. The Gemini 7 astronauts had laser equipment for spacecraft-to-ground laser voice communications. Both astronauts spotted the ground laser beacon, but no voice communications were established. (See also SPACE EXPLORATION.)

Industrial Uses for Space Technology. Government and industry leaders expressed concern over the apparent lag in the industrial utilization of the technological know-how developed in the space program. To speed up this use of space technology, NASA awarded study contracts to four companies.

Nevertheless, a start has been made toward utilizing developments in space technology for industrial and commercial applications. General Electric planned to produce the Gemini 5 type of fuel cells for industrial and consumer markets by early 1966. The Early Bird satellite, owned by the Communications Satellite Corp., was launched in April and soon thereafter provided international commercial communications services. In December 1965, only 5½ years after the first laser model was developed by Dr. Theodore H. Maiman, lasers were used in production work at a Western Electric plant in Buffalo, N.Y.

Product Trends. Advances in techniques to produce hybrid and integrated circuits highlighted electronic product developments, and these circuits continued to find new applications. (A hybrid circuit consists of combinations of thin-film devices, discrete components, and integrated semiconductor circuits. In an integrated circuit, all circuit components are formed in a single small block of semiconductor material.) New applications and improved fabrication techniques in this competitive segment of the industry resulted in price cuts, and some units were sold for less than 50 cents apiece. Also, the price of some silicon controlled rectifiers was about 50 cents each. The price was $300 in 1957.

A disquieting number of counterfeit semiconductor devices, bearing fraudulent names of reputable manufacturers, appeared on the market in the first quarter of 1965. The devices apparently were bought as surplus units from any available source. After being relabeled with false data on the manufacturer or the device type, they were sold as original equipment through unfranchised distributors. Increased vigilance by users who were warned of the practice seemed to stem the situation.

Computers. Advances in the computer field consisted primarily of development, consolidation, and the refinement of existing technology. More systems were made compatible, and there was a greater use of integrated or hybrid circuit systems. Computer time sharing, which should provide increased economy, flexibility, and the advantages of centralized data processing, was inaugurated commercially. (See also AUTOMATION.)

NAT SNYDERMAN
News Editor, "Electronic News"

ELIOT, Thomas Stearns

British-American poet, playwright, and critic: b. St. Louis, Mo., Sept. 26, 1888; d. London, England, Jan. 4, 1965.

Among poets writing in English in the 20th century, T.S. Eliot was unmatched in either reputation or influence. He dominated the course of poetry and ideas about poetry between the two World Wars. Eliot won the Nobel Prize in literature in 1948.

Life. Descended from a distinguished New England family, he was the grandson of William Greenleaf Eliot, who founded Washington University. Eliot attended Smith Academy, St. Louis, and Milton Academy, Milton, Mass., and in 1906 he entered Harvard College. His major study was philosophy, but he also edited and contributed poems to the *Harvard Advocate.* Completing the college course in three years, he continued his studies in the Harvard graduate school, at the Sorbonne in Paris, at Philipps University in Marburg, Germany, and at Oxford. He completed a doctoral dissertation on the British philosopher F.H. Bradley, but did not return to Harvard to accept his degree.

In 1915, after teaching briefly at a boys' school near London, he was employed as a clerk in Lloyd's Bank. In 1917 he began to earn his living by writing. He was assistant editor of the *Egoist,* a British literary magazine, from 1917 to 1919. A physical condition prevented his entering the United States Navy in 1918. In 1922 he founded the *Criterion,* a quarterly review that he edited until he halted its publication in 1939 at the beginning of World War II. From 1925 he was employed by the publishing house Faber and Faber, eventually as a director.

Eliot became a British citizen and a member of the Church of England in 1927. In 1915 he had married British ballet-dancer Vivienne Haigh-Wood, who was confined in mental institutions from 1930 until her death in 1947. Ten years later, he married his secretary, Valerie Fletcher.

In addition to the Nobel Prize in literature, Eliot received the British Order of Merit in 1948. President Lyndon B. Johnson awarded the poet (*in absentia*) the Presidential Medal of Freedom in 1964.

Writings. Paradoxically, Eliot was the most modern and the most traditional, the most influential and the most influenced, of poets. Some of the major influences on him were Dante, Elizabethan and Jacobean drama, and the French symbolist poets of the late 1800's. The French poet Jules Laforgue was the chief influence on Eliot's early poems. From Laforgue, Eliot acquired a conversational style, with abrupt alternations between cynical wittiness and poignant lyricism. The most famous of Eliot's early poems, *The Love Song of J. Alfred Prufrock,* first appeared in the Chicago magazine *Poetry* in 1915. In his subsequent poems, there is a blended echoing and quoting from various sources.

LONDON DAILY EXPRESS

T.S. ELIOT was married to Esme Valerie Fletcher (shown above) in 1957, ten years after the death of his first wife.

Eliot's major themes are the individual's isolation from his world, and the problem of personal identity in relation to time and to intimations of timelessness. With characteristic complexity, these themes are related to sex and the course of history in *Gerontion* (1919) and *The Waste Land* (1922). With increased emphasis on religious experience, the same themes appear in *Ash Wednesday* (1930) and *Four Quartets* (1943). Although Eliot's great reputation was produced mainly by *The Waste Land,* some critics, including Eliot himself, considered *Four Quartets* his finest achievement.

The themes of Eliot's poetry also appear in his verse dramas. *Murder in the Cathedral* (1935), modeled on Greek tragedy, treats the martyrdom of St. Thomas à Becket. *The Family Reunion* (1939) treats the questions of guilt and atonement in a contemporary secular setting. *The Cocktail Party* (1950), *The Confidential Clerk* (1954), and *The Elder Statesman* (1959) show a gradual development of the attitude that isolation may be resolved by the familiar human relations of love and understanding.

Eliot's criticism brought fresh insights into older literature. It clarified, often by implication, his own intentions in poetry and drama.

Collections of his works include *Selected Essays* (1950), *The Complete Poems and Plays* (1952), and *Collected Poems, 1909–1962* (1963).

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LEONARD UNGER
Professor of English
University of Minnesota

ELIZABETH II. See GREAT BRITAIN.

EL SALVADOR

N. AMERICA
S. AMERICA

Controversy continued in El Salvador during most of 1965 over the government's attempts to implement its social and economic reform program. Although the economy was damaged by a severe earthquake in May, and by a decline in coffee exports, industrial expansion provided some basis for optimism.

Politics. The Legislative Assembly, elected in 1964 under a new system of proportional representation, came under attack as being no more effective than its predecessors. The Christian Democrats, the chief opposition party in the assembly, proposed several measures designed to weaken the position of the majority Party of National Conciliation. Other elements in the government wanted to outlaw the Christian Democrats on grounds that they took orders from abroad.

There was speculation about the probable course of the military, which seemed to be divided by the assembly controversy and by President Julio Rivera's reform program. There were persistent reports that wealthy interests were trying to enlist military support in their opposition to the reform program.

EL SALVADOR: Information Highlights

Area: 8,260 square miles.
Population: 2,824,000 (July 1, 1964, est.).
Chief Cities (1961 preliminary census): San Salvador, the capital (1963 est.), 281,122; Santa Ana, 73,864; San Miguel, 38,330; Nueva San Salvador, 26,911.
Government: *President*—Lt. Col. Julio Adalberto Rivera (took office July 1, 1962); *Vice President*—Francisco Roberto Lima (took office, July 1, 1962). *Legislative Assembly*—52 members; party seating (1965): Party of National Conciliation, 32; Christian Democrats, 14; Renovating Action party, 6.
Religious Faiths: Roman Catholics, 98% of population.
Education: *Literacy rate* (1961)—49% of population aged 15 and over. *Total school enrollment* (1962)—403,676 (primary, 359,439; secondary, 25,543; teacher-training, 5,555; technical, 10,013; higher, 3,126).
Finance (1964 est.): *Revenues,* $89,635,000; *expenditures,* $89,635,000; *public debt* (1962), $14,520,000; *monetary unit,* colón (2.50 colones equal U.S.$1).
Gross National Product (1963): $713,600,000.
National Income (1963): $639,200,000; average annual income per person, $235.
Economic Indexes (1964): *Manufacturing,* 158 (1958=100); *cost of living,* 100 (1958=100).
Manufacturing (metric tons, 1964): Sugar, 115,000; cement, 88,000; wheat flour (1963), 27,000; cotton yarn, 3,720; beer (1963), 142,000 hectoliters.
Crops (metric tons): Coffee (1964), 111,000 (ranks 8th among world producers); maize (1964), 184,000; cottonseed (1964), 138,000; rice (1963), 21,000; dry beans (1963), 20,000; sisal (1963), 3,000.
Minerals: Gold (1960), 1,121 troy ounces; lime (1963), 477 metric tons; limestone (1963), 107,100 metric tons; salt (1964), 25,000 metric tons; silver (1960), 76,809 troy ounces.
Foreign Trade (1964): *Exports,* $178,000,000 (chief exports: coffee, $93,440,000; cotton, $37,120,000); *imports,* $191,000,000 (chief imports, 1963: nonelectrical machinery, $15,188,000; motor vehicles, $11,452,000; textile yarn and fabrics, $9,856,000). *Chief trading partners* (1963): U.S. (took 25% of exports, supplied 34% of imports); West Germany (took 23% of exports, supplied 9% of imports); Japan (took 25% of exports, supplied 6% of imports).
Transportation: *National roads* (1964), 4,940 miles; *motor vehicles* (1963), 32,471 (automobiles, 22,928); *railways* (1963), 378 miles; *principal airport,* Ilopango.
Communications: *Telephones* (1964): 20,600; *television stations* (1964), 3; *television sets* (1964), 30,000; *radios* (1962), 358,000; *newspapers* (1961), 13 (daily circulation, 122,000).

President Rivera, in a speech given in October, said that army officers had the right to participate in politics as private citizens, but had no right to interfere in the electoral process. It seemed clear that he hoped the army would continue to concentrate on its Civic Action programs in education, public health, and construction.

Earthquake. One of the worst earthquakes in El Salvador's history shook San Salvador and its suburbs on May 3, leaving about 100 dead and 500 injured. Nearly 5,000 buildings were destroyed and another 14,000 damaged. Assistance was rushed to El Salvador from the four other countries in the Organization of Central American States, and from United States installations in the Panama Canal Zone.

Economy. Conservatives protested, without much success, against the government's economic reform measures. They objected to laws passed in 1965 regarding social security, minimum wages, and labor code reform. Protests were particularly strong when the government passed a minimum farm wage act and abolished the payment of wages in food in rural areas. The Institute of Rural Colonization, a government agency that offers land to peasant families, also stirred controversy. Property owners complained about the 1964 increase in income and profits taxes, partly on the grounds that these taxes frightened away foreign capital.

It seemed apparent that the economy would not grow in 1965 at the satisfactory rate of 9% achieved in 1964. A National Development Plan for 1965–69, calling for an annual industrial growth rate of 14%, was announced by the government. The 14% rate will be difficult to achieve, however, if coffee sales continue to be poor. Much of the Salvadoran crop could not be sold under the International Coffee Agreement quota.

The value of commodities exported in the first five months of 1965 was $165.5 million, a decrease of some 18% from the comparable period in 1964. The drop was caused chiefly by the lower shipment of coffee, which El Salvador withheld from the world market in an effort to raise prices. Corn imports for the same period in 1965 were at a record high because of a small domestic crop. It was expected that the 1965–66 crop would be even smaller.

Communism. The issue of Communist subversion continued to stir debate. In April a labor congress was held in San Salvador, and, because it included Communist-controlled unions, there was some fear that it would promote subversion. However, President Rivera said in June that the Communist problem was under control. In July the University of San Salvador charged that its mail from Moscow had been opened by government officials. Two Chilean professors, suspected of being Communist agitators, were expelled from El Salvador in August.

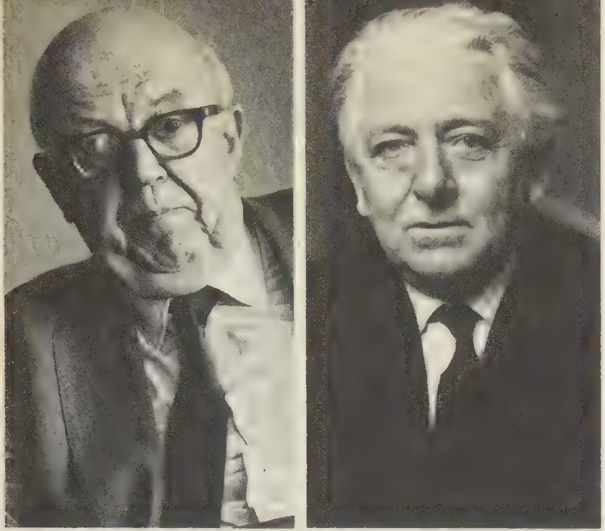
Proposed Canal. The possibility of building a U.S.-Nicaraguan sea-level canal through Nicaragua aroused Salvadoran opinion. It was asserted that any concessions to the United States involving rights in the Gulf of Fonseca would have to include an agreement with El Salvador also.

ROBERT JONES SHAFER
Professor of History, Syracuse University

EMPLOYMENT. See LABOR.

ENGINEERING. See BRIDGES; CANALS; DAMS; HIGHWAYS; RAILROADS; TUNNELS.

ENGLAND. See GREAT BRITAIN.



PIX PIX

NOVELISTS C.P. Snow (*left*), who became a peer in 1964, and Angus Wilson attracted much literary attention in 1965 for *Corridors of Power* (Snow) and *Late Call* (Wilson).

ENGLISH LITERATURE

Two recent events emphasized the diminution, if not the extinction, of the aristocratic spirit in English letters: the deaths of Dame Edith Sitwell (Dec. 9, 1964) and of T.S. Eliot (Jan. 4, 1965). *The Times Literary Supplement* of London, in the first of a series of issues entitled *Sounding the Sixties,* maintained that violence is the literary keynote of the 1960's, and that in the drama "the images of Beckett, Weiss, and Pinter are dominant." Certainly the abyss between Eliot's *The Cocktail Party* (1950) and Pinter's *The Homecoming* (1965) is immeasurable.

Fiction. Of the novels that appeared during the 1964–65 publishing year, the first two that attracted considerable critical attention were by C.P. Snow and Angus Wilson. Of the two, the more widely read and criticized was Snow's *Corridors of Power* (1964), the ninth volume in his *Strangers and Brothers* series. Interest in the novel was intensified by the author's elevation to the House of Lords as Lord Snow of Leicester on recommendation of the Labour government. In *Corridors of Power,* as in Snow's earlier novels, Lewis Eliot is the narrator. He recounts the rather unscrupulous means by which Roger Scaife becomes Conservative minister of defense, Scaife's attempt to develop support for a bill to ban Britain's production of nuclear bombs, his failure to get the necessary parliamentary support, and his consequent resignation. Not only literary critics but politicians and historians discussed the novel. Their consensus seemed to be that Snow's knowledge of the power struggle was formidable but not impeccable, and that his civil servants tended to be merely civil servants and not full-bodied human beings.

DRAMATISTS Harold Pinter (*left*) and John Osborne provided the London stage with its two sensations of 1965: *The Homecoming* (Pinter) and *A Patriot for Me* (Osborne).

PIX PIX

Wilson's *Late Call* (1964) has a private and not a public subject. Its central character is Sylvia Calvert, whose boastful and self-deceived husband has forced her out of the management of their hotel. The Calverts go to live in one of the small recent British urban developments called new towns. They move in with their recently widowed son—a progressive schoolmaster and a do-gooder—and with his three problem children. The son's pretentious attempts to make the new town a civilized place is contrasted with the mother's quiet and devoted goodness. She does what she can with the difficult children, and, when freed by her husband's death, she finds the courage to begin life for herself. Although some critics felt that Wilson was more successful in satirizing the aspirations of the denizens of the new town than in making his heroine's goodness convincing, all agreed that he showed a new warmth and kindliness of spirit.

The novels most widely noticed in 1965, on the whole, found their subject matter in the lives of characters from the less-privileged social classes. Doris Lessing's *Landlocked,* the fifth novel in her *Children of Violence* series, shows her South African heroine, Martha Quest, at a point where her unsuccessful second marriage is about to end in divorce. She moves in Communist circles and finds there a lover. When the affair has come to its end with her lover's death, and when the rosy glow around communism has faded, she plans to leave for England. Mrs. Lessing communicates effectively the states of mind of her muddle-headed heroine.

Alan Sillitoe's *The Death of Bill Posters* finds its title in the familiar warning, "post no bills." The warning symbolizes for the novel's rebellious workingman hero, Frank Dawley, everything that he hates about England. Expressing his rebellion by precipitately leaving his wife, he takes to the road, has brief affairs with two married women, and embarks for North Africa. He is last seen with a radical American girl, as they plan to run ammunition across the Morocco-Algeria border. Although there are passages of acute and persuasive observations of personal relations, the style is uncontrolled and pretentious, and the reworking of the threadbare angry young man theme is almost a parody.

On less serious themes, William Trevor's *The Boarding House* furnishes an example of black comedy. Like his first novel, *The Old Boys,* it draws its characters from the aging or the aged, but the denizens of the doomed boarding house are even more eccentric and unattractive than the old-school-tie boys of the earlier novel. Moreover, the tone of the new work is so cool that one can not be sure that Trevor did not intend to be cruel rather than sympathetic with his characters.

There is no doubt as to the intention of Malcolm Bradbury's *Stepping Westward,* perhaps the most amusing novel of the year. Its theme, paralleling closely that of Kingsley Amis' *One Fat Englishman,* exposes an Englishman to the horrors of American academic life. But Bradbury's hero, a liberal-minded declining novelist, is more attractive than Amis' hero, and his unintentional emergence as a champion of academic freedom makes him worthy of more serious consideration.

The first novel enthusiastically greeted in both England and America was *A Green Tree in Gedde* by a young Scot, Alan Sharp. The first of a proposed trilogy, it has three major male characters. John Moseby, vaguely dissatisfied with his marriage, indulges in a sordid love affair, but returns to his wife. Harry Gibbon, cast adrift by his friend Moseby's marriage, has doubts about his own erotic orientation. Peter Cuffee, whom Gibbon has come to know in the army, is unhappily involved in his incestuous love for his sister, Ruth. Gibbon and Cuffee take off for the Continent; there, Gibbon assures himself as to his basic heterosexuality, but Cuffee returns uncertainly to his sister. Sharp renders settings with poetic vividness and is good at conversation, but some critics believed his style was marred by unnecessary Joycean neologisms.

Drama. The theatrical season was highlighted by two sensational plays, John Osborne's *A Patriot for Me* and Harold Pinter's *The Homecoming.* The title of Osborne's play comes from a remark by the Austrian emperor Franz Joseph: "Ah! But is he a patriot for me?" Its subject is the career of Col. Alfred Redl, an intelligence officer in the Austro-Hungarian Army in the early years of the 20th century. Redl slowly discovers his homosexual urges and yields to them. He is blackmailed by the Russians into betraying his country's secrets, and, when discovered, is allowed to shoot himself. Osborne's forthright treatment of his subject and his inclusion of a spectacular scene of a transvestite ball led to the play's prohibition from the public stage. It is unclear whether or not Osborne saw his hero as another rebel victimized by conventional society.

Pinter's *The Homecoming,* his first full-length play since *The Caretaker,* proved to be comedy of the blackest dye. In a characteristically stark setting and in clipped cryptic dialogue, Pinter shows the effect on a father and his two sons of the return of a son who has escaped from their sordidness into American academic life. It soon becomes evident that his American wife is willing, after her husband's disturbed departure, not only to satisfy the brothers' sexual needs but to help support them by her earnings as a prostitute.

More normal and healthily robust is John Arden's play, *Armstrong's Last Goodnight,* first produced by the Glasgow Circle at the Edinburgh Festival and revived at Chichester. The struggle is between Armstrong, an independent border chieftain of the 16th century, and Sir David Lindsay, the emissary of Scotland's James V. It ends with the trapping and death of the unyielding Armstrong.

David Mercer's and Henry Livings' avant-garde plays also attracted critical attention. Mercer's *Ride a Cock Horse* raises to the fourth power the theme of the angry young man. Its hero, an aspiring Yorkshire novelist, is shown in violent and abusive relations with his wife and two mistresses, who answer him in kind. In the end, the hero collapses into psychological infantilism. Livings' *Eh?* is an extravagant farce that owes some of its manner to Ionesco. Its theme is man against machine; its scene, a boiler-room; and its hero, a man who attempts to make for himself and his wife a decent life in the presence of the underground manmade monster that he submissively tends.

Poetry. Perhaps the most memorable poetic event of 1965 will prove to be the publication of *The Complete Poems* of D.H. Lawrence, 35 years after his death. Edited by Vivian de Sola Pinto and F. Warren Roberts, it includes hitherto unpublished poems and significant variants. This definitive edition inspired numerous efforts to evaluate Lawrence's poetry. The evaluations made it clear that, while the poems contain a great deal of dross, they also have a treasurable amount of pure gold.

Robin Skelton's edition of the *Collected Poems of David Gascoyne* gave readers and critics an opportunity to reconsider the gifts of a poet who worked in a mode alien to currently popular styles. Gascoyne's poems blend surrealism and adumbrations from "the racial unconscious."

Robert Graves' publishers marked his 70th birthday by bringing out his *Collected Poems, 1965* and *Love Respelt.* The latter reproduces the manuscript of a group of his newest poems.

One critic characterized W.H. Auden's *About the House* as a "self-portrait of the artist as a growly uncle." Although some readers were put off by Auden's self-indulgent playfulness, others saw in the book an expression of the point of view and way of life of a highly intelligent and undeceived but compassionate man of middle age. Some of the characteristics of middle age are also evident in Roy Fuller's *Buff,* which takes its name from a game of forfeits. In this characteristically low-toned volume, perhaps the most impressive poems are the series *To X,* an account of a brief and unexpected love affair with a married woman. D.J. Enright's *The Old Adam* brought no surprises but offered renewed evidence of his honest deflationary reactions to alien customs and attitudes.

John Wain's *Wildtrack,* the year's most ambitious long poem, plays variations on the theme of human interdependence in styles that range disconcertingly from the solemn to the flippant. Much less ambitiously, Ted Walker's *The Fox on a Barn Door* suggests the influence of Ted Hughes. It courageously confronts the brutal and corrosive effects of nature in a vividly evoked no-man's land between ocean and shore. Alan Ross' *North from Sicily* moves rather uneasily from fairly traditional celebrations of Italy's art treasures to poems on the grubby aspects of foreign travels and reports of coolly experienced sexual encounters.

Biography. The biographies and autobiographies of 1965 were few but choice. Lord David Cecil's authorized biography of Max Beerbohm, *Max: A Biography,* deals sympathetically with its subject. Janet Adam Smith's *John Buchan* strikes a happy balance between her subject's drive toward a successful political career and his immense success as a writer of popular historical novels and suspense stories. *James Stephens: His Work and an Account of His Life,* by Hilary Pyle, tries to clear up Stephens' mystifications about his birth and origin. It estimates judiciously the work of a poet with a slight but delightful gift. In *Sean O'Casey: The Man I Knew,* Gabriel Fallon recounts in rich regional detail the friendship of their early years in Ireland and their subsequent break.

Of the autobiographies, Dame Edith Sitwell's posthumous *Taken Care Of* evoked widely divergent responses. Not so much a coherent narrative as a scrapbook assembled during her final illness, the book gives the macabre impression of a voice from the grave, extolling her friends and annihilating with intemperate but undeniable wit her critics and persons she disliked. Sir Compton Mackenzie's *My Life and Times: Octave Four, 1907–1915* tells zestfully of the writing and great success of *Sinister Street,* and presents a gallery of vivid portraits of the major literary figures of the time. *Vive Moi!,* the autobiography of Sean O'Faolain, traces his rise from humble Irish beginnings through his involvement in the Irish revolution, his fortunate years at Harvard University, and his gradual discovery of his talent as a writer of distinguished stories and novels.

FRED B. MILLETT
Emeritus Professor of English
Wesleyan University

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

On July 13, 1965, by order of President Johnson, the Coast and Geodetic Survey and the Weather Bureau were combined to form the Environmental Science Services Administration (ESSA), a new agency in the Department of Commerce. In October 1965, by directive of the secretary of commerce, the National Bureau of Standards' Central Radio Propagation Laboratory also became part of ESSA. This consolidation, concentrating in a single agency the Department of Commerce's geophysical investigation of the earth, oceans, atmosphere, and space, ensures a greater degree of cohesion in the environmental science work of the federal government.

ESSA will observe, collect, process, and disseminate comprehensive data pertaining to the oceans and inland waters, the lower and upper atmosphere, and space, including predictions of what the future holds in these areas. The agency also will combine existing warning systems for tornadoes, hurricanes, seismic sea waves, and floods into a single system, with a common communications network for transmitting warnings to local or regional offices.

Other ESSA programs include the operation of data repositories for the environmental sciences, the preparation of nautical and aeronautical charts, and exploring means by which environmental phenomena can be modified and controlled. In addition, ESSA will conduct research and develop programs to support present and future missions of other government agencies.

ESSA retains the broad capabilities of each participating bureau, enabling it to apply wide personnel and equipment resources, including satellites, ships, aircraft, and electronic computers, to the nation's environmental science service needs. Weather satellites will be used for multiple geophysical observation. Ocean survey ships will be used by meteorologists studying air-sea interaction. Large computer facilities will be used to predict oceanic conditions, to forecast conditions in the space environment, and to conduct other important geophysical programs.

The new agency operates as a unit within the Office of the Assistant Secretary of Commerce for Science and Technology. Dr. Robert M. White, former Weather Bureau chief, was appointed administrator of the Environmental Science Services Administration. Vice Admiral H. Arnold Karo, former director of the Coast and Geodetic Survey, became deputy administrator. The administration has five service and research organizations: the Weather Bureau; the Coast and Geodetic Survey; the Environmental Data Service; the National Environmental Satellite Center; and the Institutes for Environmental Research.

ROBERT M. WHITE
Administrator

EPISCOPAL CHURCH

The year 1965 began amid scenes of pageantry. On January 27, in the National Cathedral in Washington, D.C., the Rt. Rev. John E. Hines, formerly bishop of Texas, was installed as presiding bishop. His two immediate predecessors in office, Arthur Lichtenberger and Henry Knox Sherrill, took part in the solemnities.

Immediately following the installation, the Mutual Responsibility Commission held its organizational meeting. The commission is charged with restructuring the church's affairs to adapt it to a rapidly changing world and to fulfill its mission, in concert with the 18 other regional and national churches of the Anglican Communion. As part of a program to strengthen every part of the communion, the Episcopal Church committed itself to extrabudgetary projects amounting to $1 million in 1965, and a total of $6 million over the triennium ending in 1967.

The church's Executive Council operated on a budget of $13 million (the largest in history) to meet the regular commitments of the church. The program was administered under guidelines laid down by the General Convention, with priority given to overseas missions (particularly in Latin America), urban missions (emphasizing experimental approaches to the problems of rapid urbanization), and aid to theological education.

Ecumenically, the church intensified theological consultations with Eastern Orthodox leaders and held exploratory meetings with Roman Catholics in order to reduce areas of tension and enlarge spheres of cooperation and understanding. The most significant dialogue, known as the Consultation on Church Union (with representatives from the Presbyterian, United, Episcopal, Methodist, Evangelical United Brethren, and Disciples of Christ churches) has been working toward an eventual United Church which will be "truly Catholic, truly evangelical, and truly reformed."

Civil rights continued to engage much of the energies of the church. The Executive Council, in February, reaffirmed its unequivocal commitment to the movement, and many churchmen were prominent participants in the Selma (Ala.) "freedom march" and other civil rights activities. The church also is thoroughly involved in the Delta project in Mississippi. Jonathan M. Daniels, a 26-year old seminarian from Keene, N.H., who was shot in Hayneville, Ala., on Aug. 20, while aiding in the Negro voter drive, became the first Episcopal martyr to the cause of civil rights.

In April the presiding bishop, in solemn ceremonies in São Paulo, relinquished jurisdiction over the church's three Overseas Missionary Districts in Brazil, and the Episcopal Church of Brazil came into existence as the 19th self-governing province of the worldwide Anglican Communion. It was the first such province to be created entirely out of missionary dioceses of the American Episcopal Church.

CHARLES M. GUILBERT
Secretary, the Executive Council
Episcopal Church Center

ERHARD, Ludwig

Chancellor of West Germany: b. Fürth, Bavaria, Feb. 4, 1897.

Erhard was reelected chancellor of West Germany in 1965 after his Christian Democratic Union-Christian Social Union won a plurality in elections to the Bundestag (lower house of parliament) in September. During the year, Erhard took an active role in foreign affairs, meeting twice with French President Charles de Gaulle and twice with U.S. President Lyndon Johnson.

Elections. In the September 19 elections, Erhard's Christian Democratic Union (CDU) and its Bavarian sister party, the Christian Social Union (CSU), won 47.6% of the total vote and gained 243 of the Bundestag's 492 seats. Backed by a coalition that included the CDU-CSU and the Free Democratic party (48 seats), Erhard was reelected chancellor when the Bundestag convened on October 20. His cabinet, which included Erich Mende, leader of the Free Democrats, as vice chancellor and minister of internal affairs, was approved by the Bundestag on October 26.

Foreign Relations. Under the terms of the 1963 Franco-German cooperation agreement, which calls for semiannual meetings between French and German heads of state, Erhard conferred with French President Charles de Gaulle on January 9 to 10, near Paris, and from June 11 to 12, in Bonn. They discussed their policies on the Common Market and western European unification, the political unification of West and East Germany, and West Germany's role in the nuclear defense of the West. Although the talks did not produce conclusive agreement on issues, both leaders indicated that they had been fruitful.

In talks with President Johnson in Washington, D.C., on June 4 and December 19, Erhard received assurances that the United States would continue to defend western Europe and to support West German efforts to bring about the political unification of Germany. Johnson and Erhard discussed the crisis in the Atlantic alliance, but announced no decision on a policy to improve the situation.

In January 1965, Erhard precipitated a crisis in West Germany's relations with several Arab states when he announced that he had authorized the shipment of $80 million worth of arms to Israel. The shipments were halted in February after the United Arab Republic threatened to sever diplomatic relations with West Germany if the military assistance to Israel did not cease. A break in diplomatic relations between the two nations came a few months later, however, when West Germany decided to grant diplomatic recognition to the government of Israel. (See GERMANY.)

CHANCELLOR ERHARD talks to reporters on Sept. 19, 1965, after his CDU-CSU coalition won Bundestag elections.

PICTORIAL PARADE

Background. After receiving a doctorate in economics from the University of Frankfurt in 1928, Erhard worked for a government-sponsored market research agency in Nürnberg. He had become director of the agency by 1942, when he was dismissed after refusing to join a Nazi organization. After World War II, as economic director of the Anglo-American occupation zone, Erhard was able to put into effect the policies that were responsible for the postwar German "economic miracle." He served in the first postwar Bundestag and in Chancellor Konrad Adenauer's cabinet as minister of economic affairs. He succeeded Adenauer as chancellor in 1963.

ESTONIA. See UNION OF SOVIET SOCIALIST REPUBLICS.

ETHIOPIA

EUROPE
ASIA
AFRICA

The state visit of Queen Elizabeth II of England overshadowed the events in Ethiopia during 1965. News of a different sort was made when Ethiopia's former ambassador to the United States was accused of embezzling embassy funds.

Royal Visitors. Queen Elizabeth and her husband, Prince Philip, Duke of Edinburgh, arrived by air in Ethiopia's capital, Addis Ababa, on February 1 for an eight-day state visit. This was the first time a reigning British monarch had visited the country. The queen was returning the courtesy of Emperor Haile Selassie's visit to Britain in 1954.

The royal couple was conducted through admiring throngs and triumphal arches to the emperor's Jubilee Palace. Subsequently, they visited breathtaking Tisisat Falls at Bahar Dar on the southeast tip of Lake Tana; flew to Gondar, Ethiopia's former capital, to see the castle of Fasilides and the grave of British consul Walter Plowden; spent a night under canvas at Amba Giorghuis; and proceeded to Aksum, the ancient seat of Christianity in Ethiopia.

Diplomatic Scandal. In April the Ethiopian ambassador to the United States, Birhanu Dinke, resigned his post and exiled himself to the United States to protest "oppressive rule" in Ethiopia. On June 14, Ethiopian embassy officials accused the former ambassador of having misappropriated $20,000 of the embassy's funds prior to his resignation. Dinke publicly denied the charge and asserted that he had sought a change of status in order to

EMPEROR HAILE SELASSIE I (seated, center) entertains royal visitors at a banquet in Addis Ababa on February 1. Queen Elizabeth II and Prince Philip of Britain paid an 8-day visit to Ethiopia, February 1–8.

KEYSTONE

ETHIOPIA · Information Highlights

Area: 457,266 square miles.

Population: 22,200,000 (July 1, 1964 est.).

Chief Cities: Addis Ababa, the capital, 504,900 (1964); Asmara, 120,000 (1963); Dessie, 56,400 (1963); Harar, 42,700 (1963).

Government: *Emperor*—Haile Selassie I (b. 1891; crowned king 1928, emperor 1930); *Premier*—Tsahafi Tiizaz Aklilou Abde Wold (took office April 17, 1961); *Parliament*—Chamber of Deputies, 251 members (elected); Senate, 120 members (appointed).

Religious Faiths: Ethiopian Orthodox, 90% of population; Roman Catholics, 0.6%.

Education: *Literacy rate* (1963)—5% of population. *Total school enrollment* (1962)—303,842 (primary, 288,499; secondary, 9,440; teacher-training, 1,675; technical, 3,187; higher, 1,041).

Finance (1964–65 est.): *Revenues,* $134,760,000; *expenditures,* $143,440,000; *monetary unit,* Ethiopian dollar (2.50 dollars equal U.S.$1).

Agricultural Production Index (1964): 128 (1956–57 = 100).

Manufacturing (metric tons, 1963): Sugar, 59,000; cement (1964), 44,000; wheat flour, 23,000; cotton yarn, 5,500.

Crops (metric tons, 1964–65 crop year): Coffee, 93,000 (ranks 10th among world producers); barley, 778,000; maize, 714,000; chick peas, 168,000; dry peas, 115,000; lentils, 94,000; dry beans, 105,000; linseed (1963–64), 52,000.

Minerals (metric tons, 1964): Salt, 263,000; feldspar, 9,957; lime, 6,400; manganese (1962), 6,000; gold, 27,300 troy ounces; platinum, 180 troy ounces.

Foreign Trade (1964): *Exports,* $105,000,000 (chief exports: coffee, $63,560,000; oilseeds, $10,640,000; hides and skins, $8,600,000; cereals, $5,640,000); *imports,* $123,000,009 (chief imports, 1963: textile yarn, fabrics, $16,628,000; transport equipment, $14,808,000; nonelectrical machinery, $14,346,000). *Chief trading partners* (1963): U.S. (took 38% of exports, supplied 12% of imports); Italy (took 9% of exports, supplied 16% of imports); Japan (took 4% of exports, supplied 14% of imports).

Transportation: *Roads* (1964), 14,292 miles (839 paved); *motor vehicles* (1964), 21,991 (automobiles, 15,399); *railways* (1963), 430 miles; *merchant vessels* (1964), 3 (4,000 gross registered tons); *national airline,* Ethiopian Air Lines; *principal airports*—Addis Ababa, Asmara.

Communications: *Telephones* (1964): 17,865; *radios* (1962), 150,000; *newspapers* (1963), 10.

organize an Ethiopian citizen's council for the purpose of bringing democracy to his country.

Economy. The Ethiopian budget for the fiscal year ending July 7, 1966, provides for (in Ethiopian dollars) expenditures of E$449 million and revenues of E$298 million. The deficit of E$151 million was about 43% greater than the estimated deficit for the 1965 fiscal year. Most of the new deficit is to be financed by foreign assistance of various kinds. Both current and capital expenditures will be higher in fiscal 1966 than in fiscal 1965. National defense outlays are scheduled to rise to E$100 million from E$75 million in fiscal 1965; Ministry of Interior expenditures, to E$78 million from E$60 million; and Ministry of Education outlays, to E$52 million from E$48 million. As usual, most of the revenues will be derived from customs duties and indirect taxes. Direct taxes are expected to yield about E$60 million of the total.

Foreign Aid. In March the World Bank granted Ethiopia a $6 million loan, repayable in 20 years, for further improvement of the country's telecommunications network. In June a new two-year United States-Ethiopian economic development program was announced. The loan of $39.2 million is intended to strengthen Ethiopia's financial resources, to furnish the country with a broad range of essential commodities, and to generate local currency. Bulgaria also extended aid in the form of a $5 million loan for joint Bulgarian-Ethiopian enterprises to grow cotton, grain, and other crops, to process meat, and to produce pharmaceuticals.

ERNEST W. LUTHER
Economist; Author, "Ethiopia Today"

KEYSTONE

GALLA TRIBESMEN perform the traditional "Charge of the Galla" on the Addis Ababa racecourse during the visit of Queen Elizabeth and the royal party.

KEYSTONE

THE 20TH ANNIVERSARY OF VICTORY IN EUROPE is celebrated in Paris on May 8 with a display of fireworks, ending several days of commemorative activities.

EUROPE

There was something of a paradox in Europe in 1965. So far as individual states were concerned, stability and prosperity were the order of the day. On the other hand, progress in western Europe in matters of international economic and political integration came to a standstill. There was even fear that ground already won might be lost.

Western Europe. The continent's long-sustained economic boom continued, and economic forecasters, who were fairly cautious in their predictions at the beginning of 1965, regained their confidence in the later months. Even in Italy, where the economy had experienced considerable difficulties in 1963 and 1964, there was a distinct production upswing in some industries. Elsewhere, Europe's economic problems were limited largely to a chronic labor shortage and the threat of inflation, especially in West Germany.

Europe continued to be politically stable. In Britain, Prime Minister Harold Wilson's Labour government, despite a precarious parliamentary majority, enjoyed remarkable popular support in late 1965, according to British public opinion polls. The Conservative party's new leader, replacing Sir Alec Douglas-Home, was Edward Heath, who had been Britain's chief negotiator in its attempts to join the European Economic Community. He was unable to make any immediate improvement in his party's position in relation to the Labour government. The British government made an unusual approach to Europe by holding discussions on April 24–25 at Chequers, the residence of the prime minister in Buckinghamshire, England, among 20 representatives of the Socialist parties of 13 countries—the six states of the European Economic Community (the "Inner Six") and the seven members of the European Free Trade Association (the "Outer Seven").

Hostility between the two parts of Ireland seemed to lessen in 1965, with the prime ministers of Northern Ireland and of the Irish Republic meeting for the first time. On January 14, Sean Lemass, prime minister of the Republic of Ireland, paid a friendly visit to Stormont Castle, the residence of Northern Ireland's prime minister, Terence M. O'Neill.

In West Germany, in a political race that observers had expected would be close, the general election of September 19 resulted in an easy victory for Chancellor Ludwig Erhard's Christian Democratic party. The state visit of Queen Elizabeth II to West Germany, including West Berlin, from May 18 to 28, was a notable landmark in the effacing of old enmities. The queen's visit was universally popular in Germany, but less so in Britain.

In France, President Charles de Gaulle continued to dominate the political scene and apparently to command general popular support. Premier Francisco Franco in Spain and Premier António Salazar in Portugal were able to relax certain government controls, with press censorship being abolished in Spain and moderated in Portugal.

Perhaps the most disturbed state of Europe was Greece, where a political dispute between King Constantine and Prime Minister George Papandreou led to a crisis that lasted for months. Not until the end of September was the king able to find, in Prime Minister Stephan Stephanopoulos, a man who could command a parliamentary majority.

Eastern Europe. The regimes in eastern Europe remained Communist. Germany continued to be divided into two political units, and the common fear of Germany among other European countries remained strong. Nevertheless, with some variation from country to country, the eastern European countries were experiencing both an improvement in the material things of life and a new and more hopeful spirit. There was increased commerce and increased cultural exchange between eastern and western

Europe, and it seemed possible that political change might eventually ensue. (See also COMMUNISM.)

European Integration. The great negative aspect of Europe in 1965 was the deadly effect exercised by French intransigence on the development of western European international organizations. French policy proceeded on an increasingly independent course. At midyear, France withdrew from participation in the European Economic Community, thus preventing both the adoption of new policies and the continuation of existing integration negotiations. President de Gaulle, who dislikes the whole idea of supranational institutions and the growing influence of the civil servants of the European institutions, seemed determined to conduct negotiations on a government-to-government basis rather than through the machinery of the European organizations. The result was that there was no real progress toward European integration in 1965, and real fear that integration trends might have been reversed.

THE THREE FUNCTIONAL COMMUNITIES

The members of Europe's foremost economic organizations—the European Economic Community (Common Market), the European Coal and Steel Community (ECSC), and the European Atomic Energy Community (Euratom)—are the same six nations: France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg. These organizations have for some years been more important forces for European integration than have European political organizations. It was against these economic groups that negative French policy in 1965 was most effective.

MEMBERSHIP IN EUROPEAN ORGANIZATIONS, JAN. 1, 1966
(x—full member; a—associate member)

Country	Council of Europe	Euratom	ECSC	Common Market	EFTA	NATO	OECD	WEU
Austria	x	. .	. .	. .	x	. .	x	. .
Belgium	x	x	x	x	. .	x	x	x
Canada	. .	. .	. .	. .	. .	x	x	. .
Cyprus	x	. .	. .	. .	. .	. .	. .	. .
Denmark	x	. .	. .	. .	x	x	x	. .
Finland	. .	. .	. .	. .	a	. .	. .	. .
France	x	x	x	x	. .	x	x	x
Germany, West	x	x	x	x	. .	x	x	x
Greece	x	. .	. .	a	. .	x	x	. .
Iceland	x	. .	. .	. .	. .	x	x	. .
Ireland	x	. .	. .	. .	. .	. .	x	. .
Italy	x	x	x	x	. .	x	x	x
Luxembourg	x	x	x	x	. .	x	x	x
Malta	x	. .	. .	. .	. .	. .	. .	. .
Netherlands	x	x	x	x	. .	x	x	x
Norway	x	. .	. .	. .	x	x	x	. .
Portugal	. .	. .	. .	. .	x	x	x	. .
Spain	. .	. .	. .	. .	. .	. .	x	. .
Sweden	x	. .	. .	. .	x	. .	x	. .
Switzerland	x	. .	. .	. .	x	. .	x	. .
Turkey	x	. .	. .	a	. .	x	x	. .
United Kingdom	x	. .	. .	. .	x	x	x	x
United States	. .	. .	. .	. .	. .	x	x	. .

European Economic Community (Common Market). The year appeared to begin auspiciously for the EEC. On January 1, in accordance with the provisions of the 1957 Treaty of Rome, there was a new 10% reduction in customs duties on trade within the Common Market. Customs duties on industrial products were decreased to 30% of the base level of 1957. Duties on some agricultural products were lowered to 50% of 1957 levels, and on others to 45%.

More significantly, the proposal for merging the executive bodies of the three communities that had been discussed for two years was adopted. On April 8 in Brussels, Belgium, the six nations signed a treaty creating the Council of Ministers and the Commission for the three European economic communities, thus fusing the commissions of the EEC and Euratom with the High Authority of ECSC. For an interim period the new joint commission will consist of 14 members; thereafter it will consist permanently of 9. Its seat will be in Brussels, although some offices will be located in Luxembourg. The treaty was to enter into force one month after all six states had ratified it. By the end of 1965, three countries had done so.

This administrative change and the whole future of the communities came into question as a result of the events of the summer. On Dec. 15, 1964, the EEC Council of Ministers had agreed on common prices for cereal products. However, they failed to agree in the spring of 1965 on proposals put forward by the commission for financing the common agricultural policy and on other matters. This dispute, in which right was not all on one side, was complicated. The French insisted that the member states should continue to subsidize the Community's agricultural policy until 1970. While this would benefit France principally, the French regarded it as reasonable compensation for allowing the other states (notably West Germany) to sell their manufactured goods freely on the French market. The EEC commission further complicated the issue with its over-ingenious proposal that all agricultural revenues should accrue directly to the Community after July 1, 1967. The proposal would have the effect of giving the Community a tax revenue of its own, and, as expected, France would not agree to it. Another proposal, supported by West Germany, would give the European parliament (the assembly of the six EEC members) a greatly increased voice in the control of Common Market revenues.

The transitional provisions regarding financing of the common agricultural policy were due to expire on June 30, 1965. A meeting of the Council of Ministers in Brussels, June 29–30, proved unable either to make new provisions before the deadline or to agree on a procedure for extending the deadline. The French foreign minister, Maurice Couve de Murville, said that a commitment to make a new financial regulation of the agricultural fund by June 30 had been broken and that it was not possible to continue the negotiation. France's minister of information, Alain Peyrefitte, said that the French government had decided to "draw the political, economic, and juridical consequences of the situation now created."

Subsequent to June 30, France adopted an "empty chair" policy toward the Community, participating in none of its meetings except some minor technical ones. The council met briefly without France on July 26. On October 14, French Premier Georges Pompidou indicated that the crisis could be ended only on French terms, and in any event not before the French presidential election of December 5. In all previous cases where France had brought heavy pressure to bear, her five partners had backed down, but there was no indication that this would happen in regard to this issue. West German Chancellor Erhard, in particular, seemed prepared to act firmly.

Negotiations for establishing special relations between the EEC and Austria, Nigeria, Tunisia, and Morocco made rapid progress in the first half of the year but, like other discussions, were suspended in the second half.

The European Coal and Steel Community (ESCS). Demand for coal and coal products continued to decline within the Community, and even steel products leveled off in 1965. The ECSC's investment survey,

(*Continued on page 268*)

UPI

IN BERLIN, EAST GERMAN COMMUNIST POLICE stand guard at a checkpoint closed on April 7, marooning U.S. army convoy on Autobahn.

UPI

IN LONDON, PRIME MINISTER Harold Wilson (right) begins a futile trip to Rhodesia in October.

London
Paris
Berlin
Rome
E
U

IN PARIS, PRESIDENT DE GAULLE (left) confers February 9 with West German Chancellor Erhard (right) on political unification of western Europe.

PICTORIAL PARADE

IN ROME, POPE PAUL VI closes the Ecumenical Council Vatican II in ceremonies at St. Peter's Basilica on December 8.

KEYSTONE

WIDE WORLD

IN MOSCOW, ASIAN and Russian students attack U.S. embassy on February 9, protesting U.S. Vietnam policy.

EUROPE

The progress of European integration and difficulties within the Atlantic partnership, troubles with colonial territories, threats to internal and external peace and stability, national rivalries and nationalistic ambitions, and religious harmony and cooperation occupied the attention of much of Europe in 1965. The year ended with France refusing to take a full part as a Common Market member, NATO under fire from several directions, and the reunification of Germany only a hope.

Moscow
E U R O P E
Athens

IN ATHENS, DEMONSTRATORS on July 19 demand the return to power of ousted Greek Premier George Papandreou.

JILL KREMENTZ FROM NANCY PALMER

PIX

PIRATE RADIO STATION in the English Channel is one of several in Europe making illegal commercial broadcasts.

published in July, noted that capital expenditure in the ECSC coal, iron ore, and steel industries continued to decline in 1965 and might be expected to decline further in 1966. This was attributed to the completion of major 1960–61 investment plans and to the effect of gradually decreasing coal output. Coal mining capacity is expected to decrease between 1964 and 1968 in almost all of the Community's coal fields, except for possible minor increases in the Sulcis region of Sardinia and in Aachen, Germany. Output in the Lorraine region of France is expected to remain stable.

The High Authority of the ECSC concluded in March an agreement with a German banking syndicate to float a $37.5 million loan on the German capital market. This was the largest High Authority loan thus far raised on a single European market, and it brought the High Authority's total borrowing since 1952 to $542 million.

European Atomic Energy Community (Euratom). The Euratom Council of Ministers, on May 13 in Brussels, unanimously approved a modification of the Community's research program for the five-year period 1963–67. The modification places greater emphasis on the Orgel project (Orgel is the European name for an advanced type of heavy-water reactor consuming natural uranium as fuel), and Euratom's joint research center. Until 1965, the center consisted of three establishments located at Ispra, Italy; Geel, Belgium; and Petten, the Netherlands. A fourth establishment, the Transuranium Elements Institute, was officially opened on April 6 at Karlsruhe, Germany.

Despite Euratom's concentration in recent years on a research program, the Euratom Commission announced in June that nuclear reactors, which in 1964 provided only 0.8% of the Community's electric power needs, are expected to produce 3% of the Community's total electricity in 1968 and from 8 to 13% by 1975.

POLITICAL ORGANIZATIONS

While the most effective economic organizations in Europe have a membership limited to the Common Market nations, the groups working for political integration are made up of many countries. Britain, effectively blocked by France from membership in the Common Market, is an important member of the Council of Europe and other organizations.

Council of Europe. The fourth part of the 16th ordinary session of the Council of Europe was held at the Council's seat in Strasbourg, France, January 25–29. The proposed political union of Europe was debated, and reports on economic, agricultural, legal, and social matters were received and discussed. A resolution was adopted on instituting international guarantees for the protection of all the inhabitants in Cyprus. The Assembly agreed to draw up a preliminary report on the prevention of radio broadcasts from floating or airborne stations outside national territories, thus eliminating so-called "pirate radios."

The first part of the 17th session was held May 3–7. The Assembly's debates were once more concerned with matters relating to the political and economic unification of Europe. The most interesting event of the session, as of the year, was the admission of Malta as the 18th member of the consultative, quasi-parliamentary body. Giorgio Borg Olivier, Malta's prime minister, addressed the Assembly on May 4.

The European Social Charter came into force on February 26; its broad purpose is to ensure the equal social rights of the peoples in member countries.

In May, René Cassin, professor of law at the Sorbonne in Paris, succeeded Lord McNair of Britain as president of the European Court of Human Rights.

Western European Union. This seven-member body, comprising the six members of the three functional communities plus Britain, continued its unspectacular activities in 1965. The first part of the 11th session of its Assembly was held in London from May 31 to June 3. Professor Carlo Schmid of Germany, the Assembly president, stressed in his address that the reconciliation between France and West Germany, though fragile, was real and important and that the most significant task remaining was to make Britain an effective member of the European community.

OTHER EUROPEAN ORGANIZATIONS

European Free Trade Association (EFTA). Britain's 15% surcharge on industrial imports, which had been opposed by her EFTA partners when it was imposed as an emergency measure on Oct. 26, 1964, was reduced to 10% on April 26, 1965. At the suggestion of Britain, the meeting of the EFTA Council held in Vienna, Austria, May 24–25, was at the prime ministers level; five premiers were present. The meeting showed great concern with the continued separate evolution of the EEC and the EFTA, and sought means of reversing this trend. The ministers reaffirmed the importance they attach to the Kennedy round of tariff negotiations (see INTERNATIONAL TRADE).

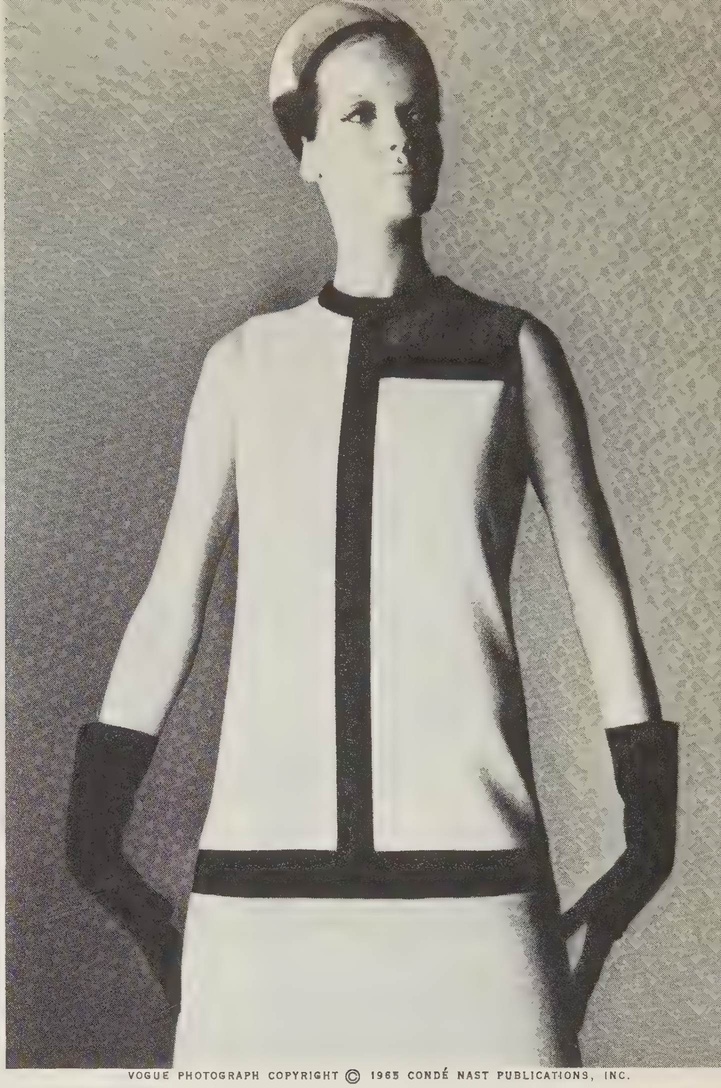
Frank E. Figgures, who had been secretary general of EFTA since its formation in 1960, resigned the post effective Nov. 1, 1965, and was succeeded by Sir John Coulson, of the British foreign office.

Organization for Economic Cooperation and Development (OECD). At the beginning of the year the Council of OECD decided to continue the European Monetary Agreement (EMA). The Council felt that EMA "could usefully assist members whose reserves and quotas in IMF [International Monetary Fund] are small in relation to swings in their balance of payments." On March 30 the Council granted Turkey $70 million in credits through the European Fund of the EMA, and instituted other measures on a three-year basis to help relieve Turkey's balance-of-payments deficit. (See also INTERNATIONAL FINANCE.)

ARTHUR C. TURNER
Chairman of the Department of Political Science
University of California, Riverside

EXCHANGE RATES. See MONEY.

EXPLORATION. See GEOGRAPHY AND EXPLORATION; SPACE EXPLORATION.



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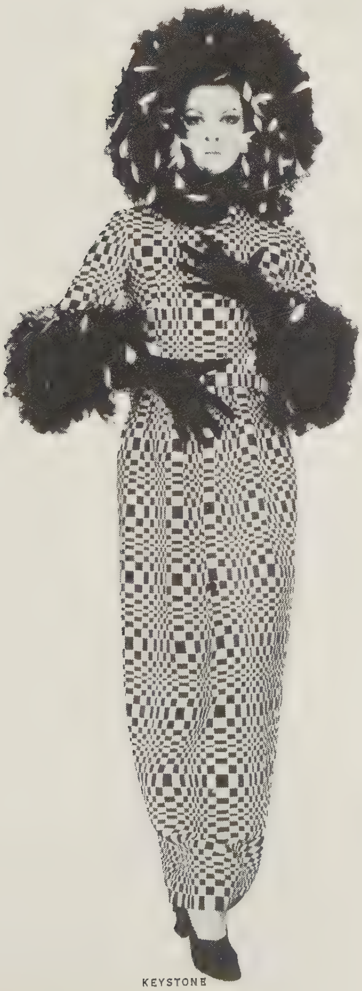
ART-INSPIRED FASHIONS of 1965 included the "Mondrian" dress (r.) by Yves St. Laurent, and "op" art fabrics, such as the one used by Capucci for the evening gown below, which has ostrich feather cuffs and hat.



KEYSTONE

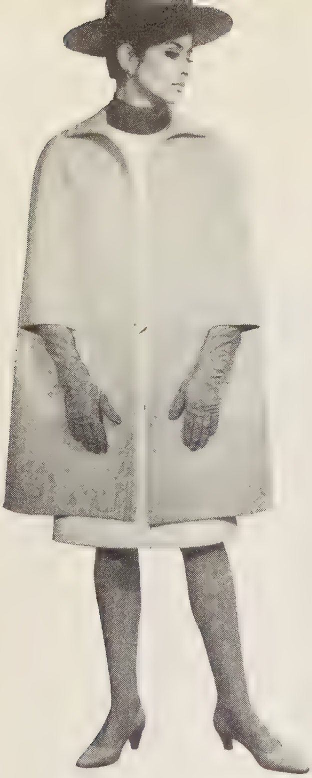
FASHION

Youth was the most important influence on fashion in 1965. And the fashion concept of youth echoed the immediacy of "op" art, the modernity of a walk in space, and the "cool" beat of the discothèque. Not since the flapper flourished has fashion so completely renounced past influences and shaped itself to the present.

Silhouette. The dress of the year—an outspoken example of the unconstructed and unconfining silhouette—was the formless shift. In spring the focus shifted to the legs, with skirts swirling and hemlines stopping inches above the knees. An elongated look was achieved by longer jackets, tunics that skimmed the body, and low, loose belts.

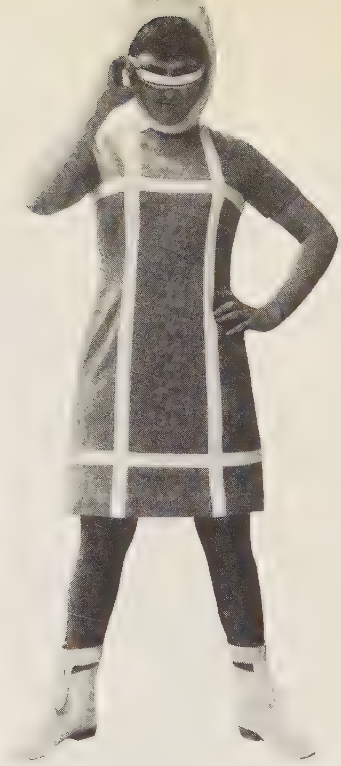
Skirts, softened by easier, prettier lines, usually had pockets that looked like giant patches, or that slipped deep into side seams. Side-wrap skirts fell slimly; flared and pleated skirts had fullness that whirled from the hipline.

Necklines for daytime were high, with softened turtlenecks or with collars that were small and tidy-looking, round and rolled, or stand-away. The halter neckline was popular for evening, as was the one-shoulder look. By autumn the after-five neckline



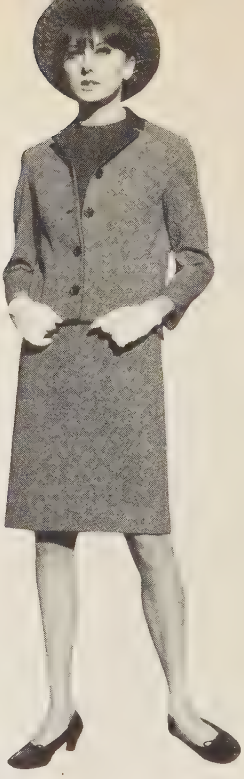
UPI

CAPE BY ST. LAURENT is seven-eighths length and gives the illusion of having elbow-length sleeves.



KEYSTONE

THE YOUNG COURRÉGE LOOK features short dresses trimmed with contrasting bands, and white boots.



UPI

ANNE FOGARTY SUIT in elasticized cotton has lapels to match the blouse.

was deeply cut, reaching for the waistline in back and daringly low in front.

Ruffles were the most feminine touch of the year. They curled around the body, rippled down the side of skirts, fell from bodice to hem on dresses, and circled hemlines in deep rows. Smocking was another important detail on yokes and cuffs.

Coats were skinny and cut high under the arms, or frankly huge with dolman or bat-wing sleeves. Lengths ranged from above the knee to almost ankle length for the greatcoat.

Fabrics. Spring brought richly textured fabrics, and many kinds of prints. Geometric prints, especially "op" art patterns were very popular.

For fall, outstanding fabrics included milkweed tweeds, heathers in rich shades, and huge blurred plaids and checks. Velvet and yarn were woven together, and Panne velvets that resembled fur were used. Double worsteds, ottomans, ribbed silks, four-ply crepes, and georgettes added texture.

Through the holidays, quilted cotton and wool were found in every price range, and twills, paisleys, printed wools, challis, melton cloth, sparkle-woven tweed, and silks added to the glitter. Lace and lacy knits were worn for both day and evening.

There was a renewed interest during the year in suede and suede cloth. The "real" suede coat became an important item. Often it was lined with real fur. Fur, in fact, reached a new high in popularity. It appeared everywhere, from coat linings to lounging pajamas. Fur dresses and skirts were matched with fur coats and fur hats.

Color. Color for spring went white—stark, bone, creamy. Pastels were bright, and bold black and white prints were popular. There also was a bouquet of marigold colors ranging from beiges to brilliant yellows and oranges. Pinks were shaded, like seashells or coral reefs, and green was important in every hue.

In general, colors were brilliant for fall, with blue emerging as the color of the year. It went from baby blue to Bristol, and was used in everything from day dresses to regal evening gowns.

Sportswear. Sportswear continued to be an important influence on all areas of fashion. Matching heathers (cross-dyes of color with white) dominated the "total look" in which everything was matched or coordinated. Patterned or solid-color stockings were coordinated with caps, scarves, sweaters, skirts, and coats.

The influence of the West made blue jeans and hipster pants popular. Waists rode low on the hips, and skirt lengths were high above the knee. Heeled boots were worn with everything. There was a nautical feeling in bell-bottom pants and pea jackets. Straight or A-line shifts and jumpers were prominent for street and school wear.

Shetland was preferred over mohair for sweaters. The "poor boy," a close fitting, narrow-rib knit, was the most popular sweater style of the year. Other sweaters had bulky turtlenecks or loose crochet weaves, and see-through knits lined in matching silks or cotton.

Most bathing suits were two-piece, cut low below the waist. One-piece suits were cut out at the midriff, or overlaid with net.

"Pants suits"—slacks combined with matching jackets—were worn for plane travel and in the city. Elaborate evening pants and pajamas were worn at home, as well as at the theater and for formal occasions.

Accessories. Hosiery became the fashion focal point as skirt lengths rose. Textured stockings in many colors and patterns were important.

KEYSTONE

PANTS SUITS BY JACQUES ESTEREL have the popular bell-bottom trousers, and are worn with coordinated coats and matching hats.

OFF-THE-SHOULDER LOOK is seen in this jeweled evening gown with feathered beret, by Jean Patou.

UPI

Hats became more important in 1965. New shapes included bandanna and scarf hats; helmets, often with visors; canoe shapes; tilting brims; shaped squares with chin ties. Black patent was used for berets, boaters, and bretons. Feathered hats were prominent for evening, and fur in a variety of shapes was worn with everything.

Shoes were light, with a little-girl look. Sling backs were important the year round. Mary Janes in bright colors featured buckles or ribbon ties. There were T-straps, button straps, and ankle straps. Shoes were generally low-heeled, especially when designed to be worn with textured stockings. Boots, from indoor shoe boots to hip-length sport boots, flooded the market in every price range.

Bags were smaller in size and more compact. Shoulder bags made a comeback.

Jewelry was generally big and chunky. There was an exotic feeling in serpent bracelets designed with multicolored stones, tasseled ropes and chains, and hanging earrings. Rings were huge and elaborate.

Children's Clothes. Children's clothes for 1965 were strongly influenced by the youth trend in adult fashion. Particularly important were contrasting pipings, architectural shaping, and short white boots. A new British feeling was expressed in "Mod" smocks, plaids, challis party dresses edged with lace, and granny knits.

A traditional look was reflected in the revival of heather tweeds, especially for boys, and in Irish and Shetland sweaters. Prints in the "pop" and "op" mode, patterned socks, and newly rugged sports clothes rounded out the picture.

Anne Fogarty
Fashion Designer; Author of "Wife-Dressing"

FEDERAL AVIATION AGENCY. See Aeronautics.

FEDERAL BUREAU OF INVESTIGATION

The Federal Bureau of Investigation (FBI), established in 1908 as the investigative branch of the U.S. Department of Justice, investigates violations of federal laws, except those assigned to other federal agencies. The bureau has jurisdiction over some 170 investigative matters, in both the general criminal and the internal security fields.

Work of the FBI increased substantially between July 1, 1964, and June 30, 1965. Convictions exceeded 13,000. Fines, savings, and recoveries totaled $235,171,542. During these 12 months the bureau located 13,491 fugitives, including about 3,300 violators of the Fugitive Felon Act, and apprehended 18 dangerous felons on the FBI's "Ten Most Wanted Fugitives" list.

Under provisions of the Civil Rights Act of 1964, the FBI investigated 1,500 cases relating to discrimination in places of public accommodation, facilities, and education. Within 24 hours of the murder of Mrs. Viola Liuzzo in Alabama on March 25, 1965, the FBI had made arrests on the basis of federal violations in connection with this crime.

In fiscal 1965 the FBI made significant strides in combating large-scale criminal activities. Convictions under the three antigambling statutes passed by Congress in the fall of 1961 rose more than 60% over fiscal year 1964. In the internal security field, five Soviet diplomats were declared persona non grata, and undesirable and dangerous aliens were excluded or deported from the United States as a result of information supplied by the FBI to interested government agencies.

Cooperative services to other law-enforcement agencies in fiscal 1965 included 276,383 examinations by the FBI Laboratory, involving 205,141 specimens of evidence. The Identification Division, national repository for fingerprint data, received an average of over 23,000 fingerprint cards each working day. At the conclusion of the fiscal year, the Identification Division files contained 175,246,960 sets of fingerprints representing almost 79 million persons.

The FBI National Academy graduated 194 law-enforcement officers in 1965. This brings the total number of graduates to 4,740.

J. Edgar Hoover
Director, Federal Bureau of Investigation

FEDERAL HOUSING ADMINISTRATION. See Housing.

FEDERAL POWER COMMISSION

A massive power blackout that struck the northeastern United States, including New York City, and parts of Canada on Nov. 9, 1965, prompted a study by the Federal Power Commission (FPC) that led to the release of the first tentative recommendations on December 6.

"Measures have already been taken," the initial report said, "to prevent the same relays [at the Sir Adam Beck II generating plant at Queenston, Ont.] from triggering another power failure." In domino effect, the blackout had spread through companies tied in to the Canada-United States-Eastern Interconnector grid and quickly covered 80,000 square miles. The FPC report said: "The power companies were interconnected . . . but it is apparent that the systems were not operating as a true power pool, that is, a fully integrated network. . . . There can be no absolute assurance that outages of the November 9 magnitude will not recur. On the other hand, there is no apparent reason why operating equipment and techniques cannot be improved to the point where the likelihood of recurrence would be so remote that it would not constitute a major worry to either the industry or the public."

The FPC's National Power Survey report, issued in December 1964, brought a sharpened awareness throughout the electric power industry of the desirability of power pooling as a means of economizing on production costs. This report contained a broad outline for a nationwide interconnected and coordinated power supply system. It also pointed out possible patterns of expansion which by 1980 could result in savings to consumers of as much as $11 billion annually. The commission plans to update the National Power Survey every three to five years.

The FPC reached a regulatory landmark by establishing a permanent system of gas producer regulation. Its opinion in the Permian Basin area rate case fixed a uniform ceiling price structure applicable to a major producing area. The Permian Basin case and three other area rate proceedings under way in 1965 covered about 75% of the gas sold in interstate commerce by independent producers.

By the end of fiscal 1965 the FPC was current in its natural gas pipeline rate work. Only one pending pipeline rate case, involving a minor increase, remained to be decided as the result of a four-year program to clear away a backlog which in 1960 involved approximately $1 billion of excess revenues collected subject to refund. Pipeline rate reductions in fiscal year 1965 totaled about $64 million, and refunds ordered by the FPC totaled $108 million. Independent producer rate decreases amounted to $12.3 million during the year, and the FPC ordered producers to make refunds totaling $32.6 million.

The commission in the fiscal year 1965 authorized 4,894 miles of new natural gas pipeline and 301,210 horsepower in compressor station capacity, at a total estimated cost of $545.5 million. It also disposed of 3,207 applications by independent producers seeking authority to sell natural gas in interstate commerce.

The FPC processed 2,686 wholesale electric rate filings, and ordered reductions amounting to over $8 million yearly. It also issued 28 major licenses for hydroelectric power projects having a total initial installed generating capacity of 3,239,945 kilowatts, at a cost of about $337.4 million.

Commission members as of Sept. 1, 1965, were the following: Joseph C. Swidler, chairman; David S. Black, vice-chairman; Lawrence J. O'Connor, Jr.; Charles R. Ross; and Carl E. Bagge.

Joseph C. Swidler
Chairman, Federal Power Commission

FEDERAL TRADE COMMISSION

The Federal Trade Commission (FTC) is an independent regulatory agency of the United States government. It was organized in 1915 for the purpose of safeguarding business and the public from unfair methods of business competition and from deception in advertising and selling. It also makes economic studies of problem areas in the nation's economy.

The FTC is composed of five commissioners appointed to staggered seven-year terms by the president and confirmed by the Senate. No more than three of the commissioners may be of the same political party. Paul Rand Dixon has been chairman of the commission since 1961.

By enlightenment and persuasion if possible, and by formal orders if necessary, the FTC takes action to halt monopolistic practices in interstate commerce. Such practices include corporate mergers which endanger competition, discriminatory pricing and advertising allowance arrangements between buyers and sellers, price-fixing conspiracies, illegal brokerage payments, and prohibited resale price maintenance.

In protecting consumers and reputable business from deceptive practices, principally false advertising, the FTC in 1965 concentrated its efforts on exaggerated claims for health products. It gave special emphasis to misleading claims for vitamin-mineral preparations and "cures" for arthritis, overstated savings schemes for food-freezer plans, and high-pressure selling practices for home improvement products and household furniture and equipment. Monitoring of advertising media, including broadcast stations, continued to be closely watched.

By a combination of legal action, persuasion, and industry counselling, the FTC protected consumers by requiring truthful and informative labeling and advertising of wool, fur, and textile fiber products. The commission also acted to protect the public from dangerously flammable wearing apparel.

The FTC's economic studies not only covered particular industries but also explored broad changes in concentration, diversification, and integration in American manufacturing industries. For example, an analysis of merger activity showed that the number of corporate mergers in 1965 was higher than at any time during the past 30 years.

The commission also completed the third and final report of its *Economic Inquiry into Food Marketing*. This report on the canned fruit, juice, and vegetable industry examined production and consumption patterns, concentration, and diversification and integration in merger activity. It also reviewed costs, profits, marketing patterns, product promotion, and entry barriers in the industry.

With headquarters in Washington, D.C., the FTC maintains 11 field offices. These are located in New York, Chicago, Cleveland, Boston, Atlanta, Kansas City, New Orleans, San Francisco, Los Angeles, Seattle, and Arlington, Va.

PAUL RAND DIXON
Chairman, Federal Trade Commission

FENCING. See SPORTS.

FINANCE, International. See INTERNATIONAL FINANCE.

FINANCE, U.S. See BANKING; BUDGET, U.S.; ECONOMIC REVIEW; FOREIGN INVESTMENTS; INCOME.

FINLAND

Both the foreign policy and the domestic politics of Finland reflected the country's concern with preserving a neutral stance in the East-West struggle while at the same time maintaining cordial relations with its neighbor, the Soviet Union.

Foreign Relations. President Urho Kekkonen stopped off in Moscow in mid-February on his way back from a state visit to India. In a speech given at the Finnish embassy on February 24, President Kekkonen expressed concern over NATO's proposed mixed-manned nuclear force and West Germany's role in it. He warned that Finland could maintain its neutrality only if peace was preserved in Europe. A flurry of press comment ensued. The *Helsingin Sanomat* asked about Finland's prior pledges that neutrality would be upheld "in all situations." On the other hand, a Communist paper asserted, "We are aligned. If war breaks out, our interests are the same as the Soviet Union's." Leaders of the coalition government, headed by Johannes Virolainen, vowed that the speech did not reflect a change in Finland's policy of neutrality.

ASIA
EUROPE
AFRICA

FINLAND · Information Highlights

Area: 130,119 square miles.
Population: 4,613,000 (July 1, 1965 est.).
Chief Cities (1963 est.): Helsinki, the capital, 482,390; Tampere, 134,735; Turku, 132,904.
Government: *President*—Urho K. Kekkonen; *Premier*—Dr. Johannes Virolainen; *Parliament*—200 members; party seating (1965)—Center Party (53); Finnish People's Democratic Union (47); Social Democratic Party (38); Coalition Conservative Party (32); Swedish People's Party (14); Finnish People's Liberal Party (13); others (3).
Religious Faiths: Evangelical Lutherans, 98% of population; others, 2%.
Education: *Literacy rate* (1961)—99.8% of population. *Total school enrollment* (1962)—933,394 (primary, 512,751; secondary, 322,971; teacher-training, 1,819; technical, 66,238; higher, 29,615).
Finance (1965 est.): *Revenues*, $1,710,000,000; *expenditures*, $1,802,000,000; *public debt* (1963), $816,000,000; *monetary unit*, markka (3.2 markka equal U.S.$1).
Gross National Product (1963): $5,813,000,000.
National Income (1964): $5,909,000,000; average annual income per person, $1,250.
Economic Indexes (1964): *Industrial production*, 163 (1958=100); *agricultural production*, 130 (1956–57=100); *cost of living*, 129 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,559,000; gasoline (1963), 526,000; crude steel, 355,200; wheat flour, 240,000; meat, 147,600; butter, 102,000; sugar 60,000.
Crops (metric tons, 1964): Oats, 742,000 (ranks 13th among world producers); rye, 163,000 (world rank, 17th); potatoes, 1,021,000; wheat, 462,000; sugar beets, 431,000; barley, 370,000; dry peas, 3,000.
Minerals (metric tons, 1964): Zinc, 62,991 (ranks 17th among world producers); copper, 32,300 (world rank, 16th); nickel, 3,062 (world rank, 7th); pyrites, 548,000; iron ore, 470,000; lime, 240,000; peat, 113,000.
Foreign Trade (1964): *Exports*, $1,291,000,000 (chief exports: paper, $395,000,000; wood, $291,000,000; wood pulp, $250,000,000); *imports*, $1,505,000,000 (chief imports, 1963: nonelectrical machinery, $196,000,000; iron and steel, $84,000,000; electrical machinery, $81,000,000). *Chief trading partners* (1963): Great Britain (took 21% of exports, supplied 14% of imports); USSR (took 16% of exports, supplied 16% of imports); West Germany (took 12% of exports, supplied 18% of imports).
Transportation: *Roads* (1964), 42,260 miles (8,026 paved); *motor vehicles* (1964), 468,212 (automobiles, 385,432); *railways* (1963), 3,379 miles; *merchant vessels* (1964), 243 (914,000 gross registered tons); *national airlines*, Finnair, Kar-Air; *principal airport*—Helsinki.
Communications: *Telephones* (1964): 728,785; *television sets* (1964), 610,000; *radios* (1963), 1,397,000; *newspapers* (1960), 64 (daily circulation, 1,597,000).

In order to isolate Finland from the great-power struggle and to convince the Soviet Union that an independent Finland posed no threat to it, President Kekkonen reiterated his plan for a Nordic nuclear-free zone to the Communist-controlled World Peace Conference, held at Helsinki in July. The proposal was greeted with enthusiasm.

Domestic Politics. Domestic politics reflected the approach of new parliamentary elections in 1966. The Agrarian party, eager to broaden its image, changed the name of its major paper from *Maakansa* (Rural People) to *Suomenmaa* (Finland) in September, and a month later renamed itself the Center party. The Finnish People's party and the Liberal League moved toward merger. The Soviet newspaper *Pravda* urged the Social Democrats to work with the Communist-dominated Finnish People's Democratic Union (SKDL) in the coming election. However, the Social Democrats demanded an impossible precondition for such collaboration: that the SKDL publicly reject violence and subscribe to complete freedom of opinion. The Communists did effect a limited electoral alliance in November with the splinter Socialist opposition.

Some observers were concerned by what they considered to be evidences of "Gaullism" in the government. A prominent Swedish People's party leader argued that "the balance of power between the Diet, president, and council of state has been disturbed in an alarming manner." An ineffectual party system was blamed for this lack of balance.

Economic Developments. President Kekkonen told the Diet on February 9: "Our per capita income this year will be about $1,250. We thus belong among the 20 wealthiest nations. Our situation looks very satisfactory." Economic progress in 1965 was on the whole quite impressive. The gross national product rose by more than 5%, and industrial production by 6%. Work stoppages were few. Prices and wages were relatively stable, due partly to tighter controls on bank loans and installment buying. The cost-of-living index rose by 4% (compared with 10% in 1964).

Some concern was felt over the steady decline in farm and forestry employment. Recent economic expansion has occurred chiefly in sectors involving relatively few laborers. There continue to be pockets of poverty in several regions. For example, on a national income scale of 100, North Karelia's income is only 65.

Foreign trade was up 12% over the 1964 level. This increase included a 24% rise in exports of the metals industry and heavy imports of Western cars. The imbalance of trade, a perennial problem, worsened. Foreign exchange reserves fell sharply, while long-term foreign credits were more difficult to obtain. On March 1, Finland reduced tariffs on industrial imports from the European Free Trade Association countries to 30% of the 1960 level.

In September a budget totaling 7 billion Finnish marks was proposed for 1966, and the government outlined a four-point program to halt excessive growth of public expenditures, strengthen exports, maintain wage-price stability, and modernize the budget system.

Finnish Academy. President Kekkonen questioned the effectiveness of the Finnish Academy, established in 1947. The state appoints 12 distinguished representatives of the arts and sciences to serve on the academy at government expense to promote the development of their own fields of endeavor. Those evaluating the academy are likely to recommend certain reforms rather than the academy's abolition.

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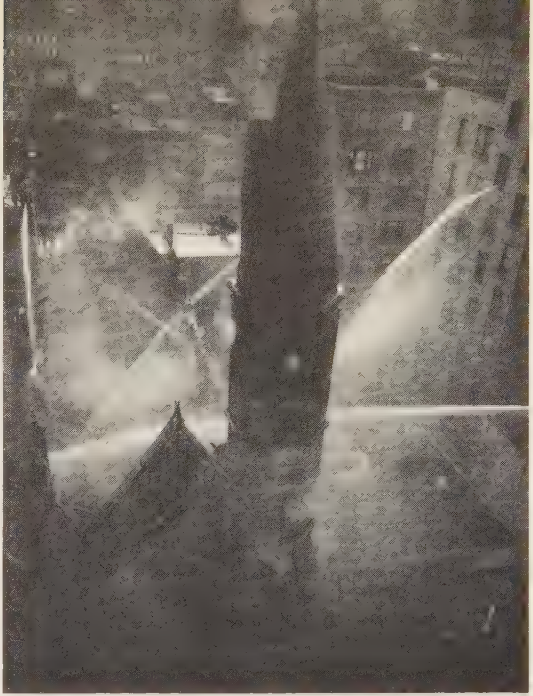
FIRES

Fire in the United States in 1965 caused 12,000 deaths and $1.76 billion in losses (up $100 million from 1964), a preliminary estimate of the National Fire Protection Association (NFPA) indicated.

Worst Fire. The worst fire tragedy of 1965 occurred August 9 when an explosion and fire killed 53 workmen at a Titan II intercontinental missile silo near Searcy, Ark. The largest single property-loss fire of the year took place January 5 at Eglin Air Force Base, Fla.; the loss from burning of a missile detection and tracking station was estimated at over $20 million.



THE NEW YORK TIMES

FIRE destroyed the interior of New York's famous old Church of St. Matthew and St. Timothy on Dec. 1, 1965.

1964 Losses. Final NFPA figures for 1964 showed that 2,367,325 fires took 11,900 lives and destroyed $1,652,700,000 worth of property (down $135,400,000 from 1963). Fire damage to all buildings and contents totaled $1,361,500,000 in 1964, $1,408,500,000 in 1963, and $1,283,000,000 in 1962.

The worst 1964 fire, in loss of life, occurred on July 9, when an inflight fire caused an airliner to crash near Newport, Tenn., killing 39 persons. The most costly fire was the $15 million destruction on June 13 of a nuclear submarine under construction at Pascagoula, Miss. The $7,240,000 fire on December 15 at the Neiman Marcus store in Dallas, Texas, was the most costly building fire.

LARGE-LOSS FIRES IN THE U.S., 1964
(Individual loss of $250,000 or more)

Classification	Number	Loss
Manufacturing	100	$ 71,338,500
Storage and warehousing	78	52,968,300
Stores	71	45,339,400
Schools and colleges	23	13,104,300
Restaurants	19	8,232,200
Residential (hotels and apartments)	15	7,633,000
Bowling establishments	11	4,604,000
Forests	11	34,505,700
Aircraft	10	9,204,500
Churches	9	3,125,000
Clubs, city and country	6	1,893,300
Railroad rolling stock, ships, and trucks	6	2,498,800
Office buildings	5	1,950,000
Missiles and missile facilities	4	26,000,000
Amusement and recreation places	2	750,000
Theaters	2	550,000
Bridges	2	1,650,000
Miscellaneous	12	13,361,500
Total	386	$296,508,500

Number of Fires. The NFPA's fire records showed 912,600 building fires in the United States in 1964. The remaining 1,454,725 fires involved aircraft, missiles, and space vehicles (125); motor vehicles

(392,200); forests (127,000); brush, grass, and rubbish (898,700); and miscellaneous (36,700).

Dwelling Fires. In 1964, dwelling fires reached a record 604,100, with $393,800,000 in losses. Of the 6,550 lives taken, 3,500 were children. The main causes of dwelling fires were careless smoking and defects in electrical and heating and cooking equipment.

Percy Bugbee
General Manager
National Fire Protection Association

FISHERIES

Since 1962 the oceans and inland waters of the world have yielded an annual catch of over 100 billion pounds of fish and shellfish. In 1964, according to the Food and Agriculture Organization of the United Nations (FAO), the world catch totaled a record 113.8 billion pounds—11% more than in the previous year.

World Fish Catch. Construction of improved fishing vessels, the use of synthetic fibers in fishing gear, the adoption of electronic fish-detection equipment, and the development of fleets of factory ships capable of operating throughout the world contributed to an increase of 150% in the world fish catch between 1948 and 1965—a far more rapid rate of increase than that sustained by the human population. The large stocks of fish and shellfish in the seas and new opportunities for fish farming in inland and coastal waters will permit further large increases in production.

About 20 nations harvest catches of a billion pounds or more each year. In 1964, Peru led with over 20 billion pounds, largely anchovies used to make fish meal and oil. Japan was second, with nearly 14 billion pounds, followed by Communist China, the Soviet Union, and the United States.

Whaling. U.S. whalers in the Pacific took 274 whales worth $734,000 in 1964, as compared with 259 whales worth $544,000 in 1963. The International Whaling Commission met in London in June 1965 and halved the quotas for factory ships in the Antarctic, in an effort to preserve breeding stock.

U.S. Fisheries. The total U.S. catch of fish in 1965 was close to the 4.5 billion pounds taken in 1964. However, the volume of the catch was about 300 million pounds less than the average for the previous 10 years, and far below the record 5.4 billion pounds caught in 1962. Prices were up sharply, and fishermen received a record of about $440 million for the fish and shellfish taken—well above the previous record of $396 million in 1962.

Species caught in greater volume in 1965 were sea herring in Maine, menhaden in the Gulf of Mexico, red salmon and king crab in Alaska, and shrimp in the South Atlantic and Gulf. Species taken in reduced volume were haddock and ocean perch in New England; sea herring, chum, and pink salmon in Alaska; and jack and Pacific mackerel in California.

The United States leads all other countries in both the volume and value of fishery imports. (The value of its imports is twice that of Britain, the country in second place.) The high U.S. value results from large imports of expensive items, such as fresh and frozen fillets, common and spiny lobsters, shrimp, scallops, and canned sardines, tuna, lobsters, and oysters.

In 1965, imports for the first time provided over half the U.S. supply of edible fish and shellfish. (Imports of industrial fishery products, consisting principally of fish meal, have exceeded domestic production since 1962.) Foreign sources provided about two thirds of the U.S. supply of groundfish (principally cod, haddock, and ocean perch) and over half the tuna, shrimp, sardines, and fish meal used. Nearly all the supply of lake trout, spiny lobsters, and canned bonito is imported.

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FISHING. See Hunting and Fishing.

FLOODS. See Disasters.

FLORIDA

An abrupt check administered by the voters in November to the growing political power of Gov. Haydon Burns highlighted developments in Florida in 1965. The state continued to experience economic growth and educational progress.

Politics. Haydon Burns, mayor of Jacksonville for 15 years, was inaugurated as Florida's 35th governor on Jan. 5, 1965. In February the state Supreme Court ruled that he could substitute his own

FLORIDA · Information Highlights

Area: 58,560 square miles.

Population: 5,913,000 (1965 est.).

Chief Cities (1965 est.): Tallahassee, the capital (54,500); Miami (325,000); Tampa (305,000); St. Petersburg (200,000); Jacksonville (198,000); Fort Lauderdale (114,000); Orlando (93,500); Hialeah (81,000).

Government: *Chief Officers*—governor, Haydon Burns (Democrat); lt. gov., none; secy. of state, Tom Adams (D); Atty. gen., Earl Faircloth (D); treas., Broward Williams (D); supt. of pub. instr., Floyd T. Christian (D); chief justice, Campbell Thornal. *Legislature*—Florida Legislature (convened Apr. 16, 1965; convenes in odd years); Senate, 43 members (41 Democrats, 2 Republicans); House of Representatives, 112 members (105 D, 7 R).

Education: *School enrollment* (1964–65)—public elementary, 742,000 pupils (25,143 teachers); public secondary, 555,000 pupils (21,724 teachers); nonpublic schools, 99,500 pupils (3,380 teachers); college and university (fall 1964), 124,204 students. *Public school expenditures* (1964–65)—$454,970,000 ($403 per pupil); average teacher's salary, $6,140.

Public Finance (fiscal year 1964): *Revenues*, $1,112,088,000 (3% sales tax, $228,449,000; motor fuel tax, $146,870,000; federal funds, $225,242,000). *Expenditures*, $980,189,000 (education, $379,786,000; health, welfare, and safety, $135,696,000; highways, $271,474,000). *State debt* (net long-term), $518,908,000 (1964).

Personal Income (1964): $12,841,000,000; average annual income per person, $2,251.

Public Assistance (fiscal year 1965): $94,854,480 to 198,354 recipients (aged, $57,982,399; dependent children, $20,311,161).

Labor Force (employed persons, July 1965): *Agricultural*, 113,300; *nonagricultural* (wage and salary earners), 1,547,800 (15% manufacturing, 26% trade, 18% government). *Unemployed persons* (July 1965)—85,800.

Manufacturing (1963): Value added by manufacture, $2,326,335,000 (transportation equipment, $131,800,000; primary metals, $2,052,000; nonelectrical machinery, $93,308,000; electrical machinery, $155,608,000; fabricated metals, $127,494,000; food and products, $499,009,000).

Agricultural (1964): *Cash farm income*, $986,672,000 (livestock, $223,063,000; crops, $750,040,000; govt. payments, $13,569,000). *Chief crops* (tons)—sugarcane, 7,119,000 (ranks 3rd among the states); citrus fruits, 5,270,000 (rank, 1st); potatoes, 259,000 (rank, 13th); peanuts, 38,000 (rank, 7th); tobacco, 14,000 (rank, 9th); corn and grain, 337,000.

Mining (1964): *Production value*, $223,409,000 (rank, 21st). *Chief minerals* (tons)—phosphate rock, 19,161,000 (ranks 1st among the states); lime, 117,000 (rank, 16th); stone, 33,157,000; petroleum, 620,000 barrels.

Fisheries (1964): *Commercial catch*, 177,966,908 pounds ($29,495,333). *Leading species*—black mullet, 37,802,216 pounds ($2,061,572); blue hard crabs, 21,019,194 pounds ($1,290,327); Tortugas shrimp, 19,351,280 pounds ($5,992,202); Campeche shrimp, 12,708,909 pounds ($4,841,785).

Transportation: *Roads* (1965), 78,000 miles (43,513 paved); *motor vehicles* (1965), 3,271,971; *railroads* (1965), 4,800 track miles; *airlines* (1965), 47 (175 airports).

Communications (1965): *Telephones*, 2,602,900; *television stations*, 27; *radio stations*, 231; *newspapers*, 51 (daily circulation, 1,704,683).

UPI PHOTOS

HURRICANE BETSY struck Florida in September. Heavy seas and winds washed the Panamanian ship *Amaryllis* ashore at Lake Worth.

MIAMI residents escape from low-lying areas as rising floodwaters caused by the devastating hurricane threaten their homes.

appointees to the Board of State University Regents for those named earlier by outgoing Gov. Farris Bryant. Furthermore, although state cabinet members normally are elected independently of the governor, Burns had the opportunity to fill three cabinet posts.

These factors, coupled with Burns' eligibility to run for reelection in 1966 under a constitutional amendment adopted in 1964, appeared to give the governor unprecedented political power. However, Burns encountered a severe setback on November 2 when the voters rejected his $300 million highway construction bond proposal, which had been endorsed by the legislature in May. The vote against the bond issue was 425,000 to 275,000.

Legislation. The Legislature met for its regular session in April and May and passed 2,700 laws. It created the office of chancellor of the state university system, authorized a medical school at the University of South Florida in Tampa, approved $88.5 million for campus construction, and established five junior colleges. It also set up a State Board of Antiquities to regulate treasure hunting along the Florida coast.

A record $1.1 billion general appropriations bill was passed. Added to expenditures from trust fund accounts, this would increase state spending for 1965–66 to an estimated $2.6 billion.

The legislature, battling through two special summer sessions, approved a new reapportionment plan which provided for 58 senators and 109 representatives. The plan ended the rule of the small-county bloc, but it still fell short of the "one man, one vote" ruling of the U.S. Supreme Court.

Racial Issues. Florida, a center of national attention in 1964 when racial tensions flared at St. Augustine, was comparatively quiet in 1965, as far as racial issues were concerned. All of the state's 67 counties filed school desegregation plans with the U.S. Department of Health, Education, and Welfare, and about 8,000 Negro students attended previously all-white schools in September.

Weather. Freakish weather caused considerable trouble during the year. A freeze in January hurt vegetable crops, and tornadoes hit eight South Florida communities in February, injuring six persons. Abnormally high tides from Hurricane Betsy damaged the Atlantic coast on September 8, and the Gulf coast on September 9.

Economy. Damage from nature's rampages was more than offset by the continued gain in tourism and industry. The 1964–65 tourist season was by far the state's largest. In November, Walt Disney announced plans to construct a major attraction, "Disneyland East," near Orlando.

The challenge of absorbing the new influx of refugees that began in October following Cuban Premier Castro's decision to let certain Cubans leave their homeland was adequately met by the state's expanding economy. About 9,700 Cuban refugees entered the United States through Miami in 1965.

Education. The state's university and junior college system continued to expand. Private higher education received a major boost with the announcement in November that the late Mrs. T.G. Buckner of Jacksonville had made a bequest estimated at $7 million to Florida Southern College, a Methodist-affiliated institution at Lakeland.

Robert H. Akerman
Chairman, Department of History
Florida Southern College

FOOD SUPPLY

KEYSTONE

FOOD SHORTAGES afflict many countries. Here, children in Chad receive milk from the United Nations.

FOOD SUPPLY

Imbalances between food supply and population created increasingly large problems in vast areas of the world in 1965. Food shortages continued to plague most of the less-developed countries and virtually all of the Communist states of eastern Europe, including the Soviet Union. In contrast, the United States, using advanced agricultural methods, produced abundantly and, under the Food for Peace program, sent abroad sizable quantities of food, including two fifths of the nation's wheat crop.

WORLD FOOD SUPPLY

In 1965, for the seventh consecutive year, world food production failed to gain significantly on population growth. B.R. Sen, director general of the Food and Agricultural Organization of the United Nations, likened the period to the seven lean years referred to in the Bible. Orville L. Freeman, U.S. secretary of agriculture, spoke of the "staggering proportions of the problem facing the less-developed countries in their efforts to keep food production in pace with population growth."

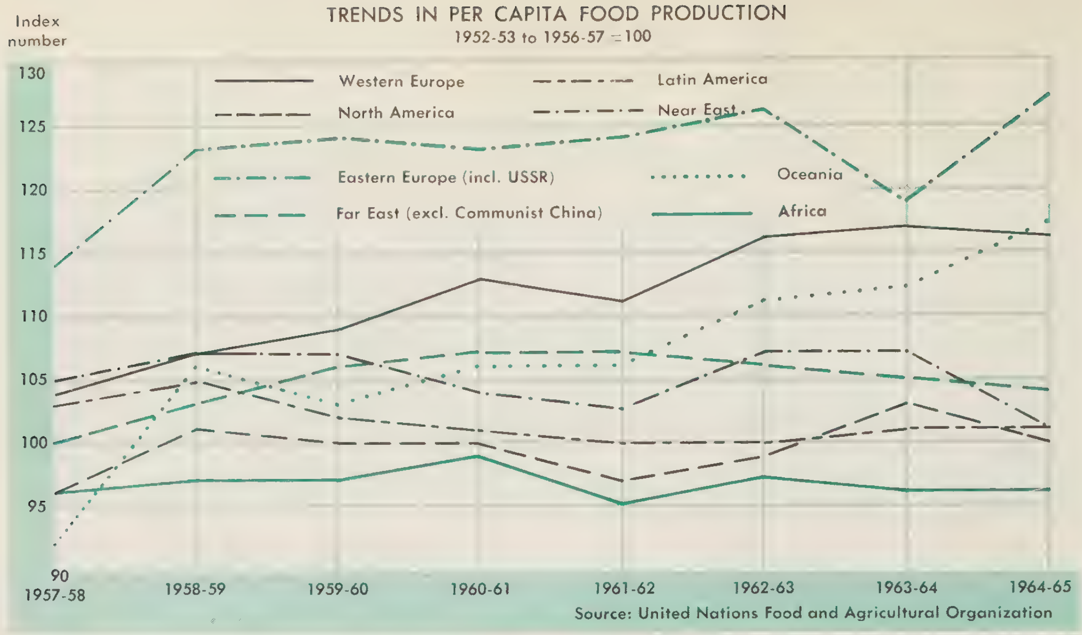
Both India and Communist China, the world's two most populous countries, imported record quantities of grain in 1965. The United States shipped nearly one fifth of its wheat crop to India in an effort to stabilize the country's food prices and avert famine. The 1965 monsoon, arriving late in India, turned out to be the poorest of this century. At the year's end, it was clear that India soon would face the worst food crisis in recent history.

Communist China's record grain imports, consisting mostly of wheat, came largely from Canada and Australia. The Soviet Union, the third most populous country, had a poor harvest in 1965, comparable to that of 1963, and required massive grain imports. Grain exports from each of the three major food-exporting countries—the United States, Canada, and Australia—reached record or near-record levels.

Food Shortages. The less-developed regions of Asia, Africa, and Latin America have been plagued with food shortages in recent years. A generation ago these regions were net food exporters, shipping some 11 million tons of grain annually to the developed regions, principally western Europe. During the early 1940's, however, they lost their exportable surplus and began to import food. As population growth rates accelerated in the late 1950's and early 1960's, their need for food imports climbed sharply, reaching a record 25 million tons in 1965. Although food output per person in these regions generally rose during the 1950's, by 1965 it showed a tendency to decline. Trends in both production and trade indicate that the less-developed countries are rapidly losing the capacity to feed themselves.

There are two ways to increase food production —by expanding the area under cultivation or by raising the output per acre in a rapid, sustained fashion. The latter is a rather recent development, confined largely to the more advanced countries. Some regions, particularly North America and western Europe, depend solely on a rising output per acre for increases in production. Many less-developed countries, however, have not yet developed a significant yield-raising capability. Furthermore, they have nearly exhausted the area of new land that can be brought readily under cultivation.

Falling further behind in the race between food production and population are such major countries as Communist China, India, the United Arab Republic, and Pakistan, plus several smaller nations in Asia and Africa. These countries contain half of the world's people, and nearly all of them import large quantities of food. They are characterized by low levels of literacy, low incomes, subsistence agriculture, and poorly developed or nonexistent agricultural supplier industries. Producer incentives are frequently lacking, and the new ideas and new cultural practices needed to raise agricultural productivity move with painful slowness. When incomes


TRENDS IN PER CAPITA FOOD PRODUCTION

1952-53 to 1956-57 = 100

Source: United Nations Food and Agricultural Organization

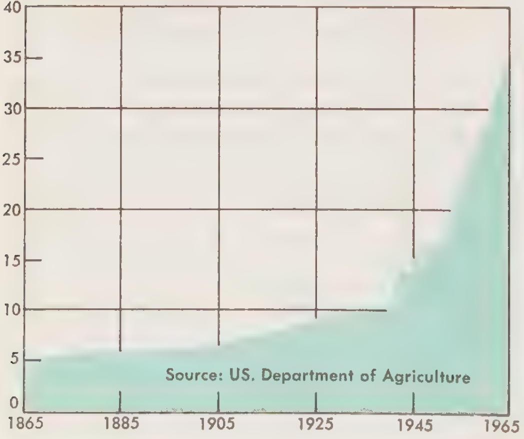
are low and agriculture is subsistence oriented, as in these countries, little cash is available for purchasing fertilizer, pesticides, and improved varieties of grains and other food crops.

In the Soviet Union and many eastern European countries, food shortages are due largely to the weak link between effort and reward. Unless this basic defect is remedied, the need for imported food in these countries probably will continue to increase.

Food Surpluses. A generation ago, six out of seven of the world's major geographic regions—North America, South America, eastern Europe (including the Soviet Union), Asia, Africa, and Oceania—were net grain exporters. Western Europe alone was an importing region. Today, only two regions—North America and Oceania—are consistent net exporters. Because Oceania has only 1% of the world's cropland, it is a relatively small exporter. North America, however, by rapidly increasing its grain exports, is becoming the breadbasket of the world.

The United States is the only country that limits the amount of food its farmers can produce. All other countries produce as much grain as they can, either for home use or export. However, in 1954 the United States, in an effort to link its excess food-producing capacity with the needs of the food-importing countries, adopted what is now commonly known as the Food for Peace program. Under this program the United States ships large quantities of food to needy countries on concessional or noncommercial terms. These massive shipments consist largely of wheat, but they also include rice, corn, nonfat dry milk, and soybean oil. U.S. food exports under the Food for Peace program, totaling $1.7 billion in 1965, exceed the total food exports of any other country.

PERSONS SUPPLIED PER U.S. FARM WORKER



Source: US. Department of Agriculture

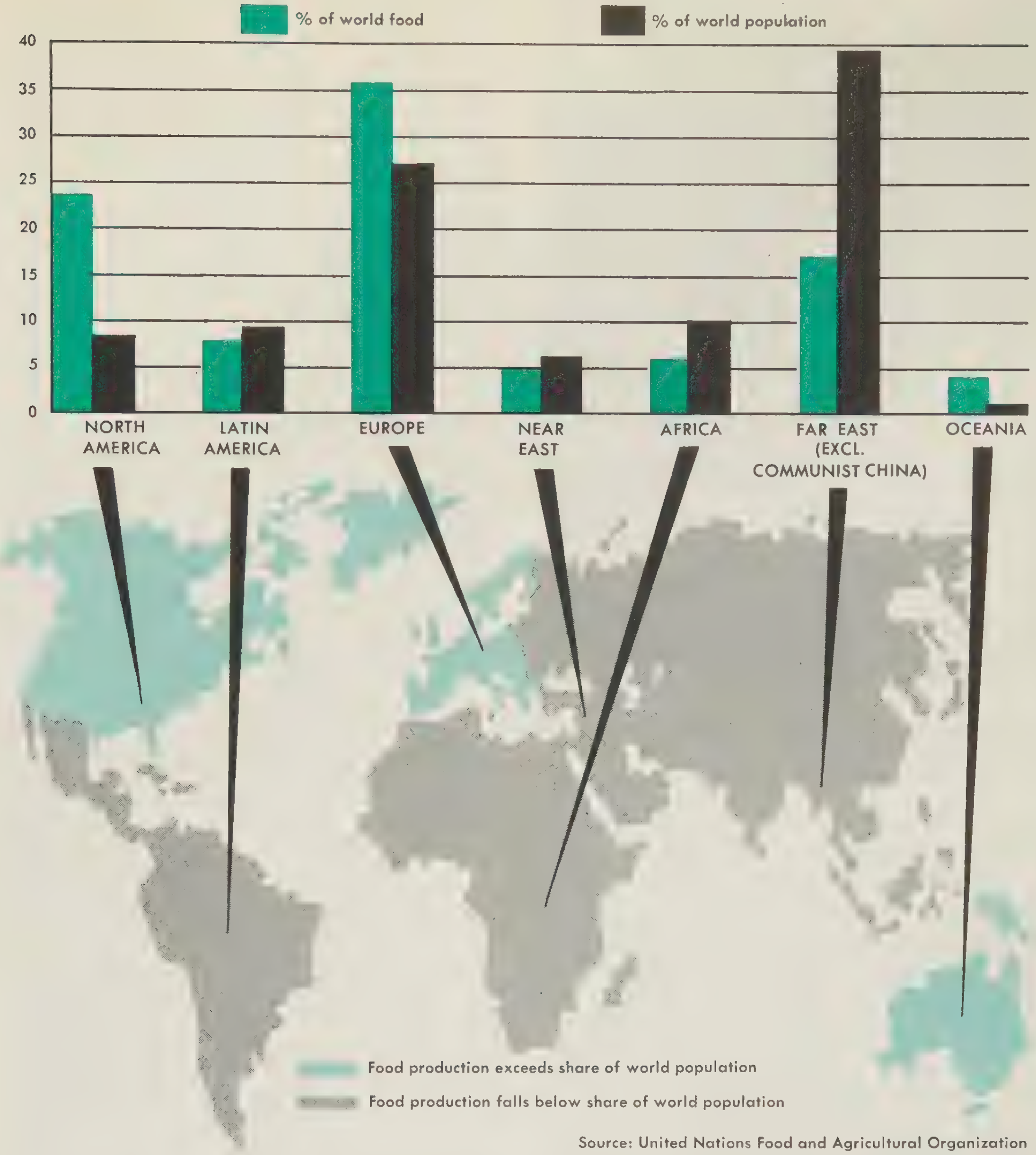
Three factors could limit the amount of food that can be transferred from the United States to the less-developed countries which need food but cannot afford to buy it: (1) the ability of American farmers to produce; (2) the availability of resources to finance these transfers; and (3) accommodations for transport and distribution. However, it is only the latter two factors that tend to limit American food shipments to such countries. Port facilities in India, for example, were strained to the limit in 1965. The cost of concessional food shipments, averaging more than $1.5 billion annually, accounts for more than one fourth of the U.S. Department of Agriculture's annual budget. American farmers produced about 175 million metric tons of grain in 1965 and could have produced perhaps 40 million more tons if a market had existed.

Population Explosion. World population, estimated at 3.3 billion in mid-1965, is gaining by more than 2% per year. Some 65 million people—roughly equivalent to the population of France and the Scandinavian countries—were added in 1965. During the next 15 years, the world must prepare to feed an additional 1 billion people. Most of this projected increase in population will come in the less-developed regions, and this growth will further worsen the already serious imbalance between food and people.

The explosive rates of population growth that characterize nearly all less-developed countries are sometimes ascribed incorrectly to rising birth rates. In fact, however, they are due largely to a reduction in death rates, particularly among infants. The age-old equilibrium between high birth rates and high

HOW FOOD PRODUCTION COMPARES WITH POPULATION

(By regions, 1960)



Source: United Nations Food and Agricultural Organization

death rates has been destroyed. A new equilibrium can be established either by falling birth rates or rising death rates.

The less-developed countries are experiencing rates of population growth far higher than those ever experienced by the advanced countries. As a group, the advanced countries have never had a population growth rate much above 1% annually. Populations in the less-developed countries, however, are expanding at a rate of from 2 to 3% annually.

Much of the hard-earned increase in food production in the less-developed countries in recent years has been largely or entirely offset by increases in population. A comparison of western Europe and Latin America makes clear the relation between population growth and an adequate food supply. Both regions have expanded agricultural production at a rate of about 2.5% annually over the last decade. In western Europe, where population has been growing at about 1% per year, diets have improved substantially; but in Latin America, where population has increased by nearly 3% per year, food consumption per person has declined.

A major development in 1965 that may contribute toward slowing down the population explosion was the large-scale distribution in several countries of the new intra-uterine contraceptive device, commonly called IUD. It is the first birth-control device that is both economically and technically practical for large-scale use in the low-income countries, making possible the organization of nationwide family-planning programs. IUD became available in quantity in both the United States and India in the early part of the year, and in August the first Indian factory manufacturing IUD's went into production.

President Johnson added to the likelihood that 1965 will mark a turning point in the worldwide effort to bring population growth rates down to manageable levels. In his State of the Union address he said, "I will seek new ways to use our knowledge to help deal with the explosion in world population

UPI

HUNGRY CHILDREN of South Vietnam are fed spoonfuls of peaches by a U.S. Marine during a letup in combat.

and the growing scarcity in world resources." (See POPULATION TRENDS.)

Dietary Levels. *The World Food Budget,* a detailed study published by the U.S. Department of Agriculture late in 1964, showed that two thirds of the world's people live in countries where average diets are nutritionally inadequate. Throughout the world the quality of diet is closely related to the level of income. All countries with diets below the minimal nutritional standards lie in the less-developed regions of Asia, Africa, and Latin America, while all European and North American countries have adequate diets.

The per capita intake of calories in the diet-deficit countries averaged scarcely two thirds that of the United States. Differences in animal protein intake were even greater, with the consumption per person in the diet-deficit countries only one tenth that of the U.S. rate. The average American consumes nearly one egg and one quart of milk (in all forms) every day, but the average person in the diet-deficit countries gets only one egg and one quart of milk every ten days. The lack of adequate amounts of high-quality protein in diets is the chief cause of severe malnutrition.

The percentage of the world's population suffering from nutritionally inadequate diets has diminished gradually throughout this century. However, the number of people affected is greater now than ever before, and continues to increase. Most of the people added to the world's population in 1965 were born in countries where average diets were nutritionally inadequate. (See NUTRITION.)

Expanding the Food Supply. A few of the less-developed countries have registered great success in improving their agriculture. Nationalist China (Taiwan), Greece, and Mexico are included in this group. The latter two, food importers until recently, have become net food exporters.

Although many less-developed countries expanded food output in 1965, the increases usually fell short of meeting the rising food needs. The expanding food shortages in the developing countries stem from their inability to realize the existing potential as rapidly as is required. Only a few countries have been able to develop the policies and provide the agricultural inputs needed to increase food production in a rapid, sustained fashion.

Existing agricultural technology has been developed largely in the advanced temperate-zone countries of North America and western Europe. The need for agricultural progress, however, is greatest in the tropical and subtropical regions, where most of the food-deficit, less-developed countries lie. A much greater effort is needed to adapt borrowed technology to local conditions.

Plant-breeding efforts that have been under way for several years are beginning to succeed in several areas. Outstanding varieties of short-stemmed, dwarf wheat, developed by the Rockefeller Foundation in Mexico, contributed heavily to Mexico's emergence as a wheat exporter. These varieties have been introduced into both India and Pakistan—

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A FOOD-DEFICIENT COUNTRY, Tanzania encountered additional troubles in 1965 when drought ruined crops. Tanzanians shown here gathered to pray for rain.

countries with wheat-growing conditions similar to those of Mexico. In the Philippines the International Rice Research Institute, which is supported by a number of private philanthropies and governments, reported encouraging results in developing improved varieties of rice for use in tropical and subtropical rice-producing countries.

The United Nations, the World Bank, and countries that give or receive aid began to pay more attention to agriculture in 1965 than in years past. For example, India established a Food Grain Corporation patterned closely after the Commodity Credit Corporation of the United States. The corporation's principal function is to support prices of farm products, thus encouraging farmers to use more fertilizer.

The Outlook. The potential for increasing food production in the food-deficit regions over the next few years is good. Nevertheless, the prospects are dim for realizing this potential as rapidly as population growth requires. Thus, it is likely that imbalances between the amount of food and the number of people will worsen, and that the more advanced countries, particularly the United States, will provide ever-larger quantities of food for the less-developed countries.

Half of all the people in the world live in the rural areas of Asia, Africa, and Latin America. Lifting their food production to satisfactory levels is an immense undertaking and demands far-reaching behavioral changes on the part of millions of farmers. The food supply problem can be attacked in three major ways: (1) by shipping more food to the food-deficit countries; (2) by helping these countries improve their own agriculture; and (3) by assisting them in developing family-planning programs. In 1965, at least some progress was made on all three fronts.

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U.S. FOOD INDUSTRY

The U.S. food industry, which includes some 37,000 factories with 1.6 million workers and ships more than $68 billion worth of food annually, continued in 1965 to introduce new and improved manufactured foods, as evidenced by the items available in the country's supermarkets. Meanwhile, U.S. farmers set another crop record during the year, lifting output 17% above the 1957–59 level. (For details of farm output, see AGRICULTURE.)

New Products. Freeze-dried fruit in breakfast cereals was the outstanding food products success story of 1965. Heretofore, the market for freeze-dried foods was limited largely to the military forces, campers, and in the case of freeze-dried shrimp, institutions. In the freeze-drying process, food is quick-frozen and then dried in a high vacuum, permitting the frozen moisture to be removed without going into a liquid state. Freeze-dried food products are light in weight, porous, and easily rehydrated. They require no refrigeration, but they must be stored in airtight and moistureproof packages.

The distribution of so-called synthetic meats—formerly sold only in health-food stores—has expanded to major supermarkets. Synthetic meats are soy-protein fibers spun by means of a special process into food having a meat-like texture and flavored to

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AFRICA imports much food, but this market at Abidjan, Ivory Coast, sells vegetables and fruits from nearby farms.

JILL KREMENTZ—NANCY PALMER PHOTO AGENCY

U.S. FOOD EXPORTS helped India avert famine in 1965. Wheat being loaded in Bombay will be delivered to villages.

simulate chicken, pork, or beef. These products, fabricated with complete control over fat content (type and amount), protein value, and other nutritional characteristics, were marketed in frozen, canned, and dehydrated forms in 1965. Spun soy-protein fibers also can be used to produce nearly any kind of food with a natural fiber structure, including products that resemble fish, fruits, certain vegetables, nut meats, potato chips, and coconut.

Low-calorie peanuts, obtained by a new process announced by the U.S. Department of Agriculture, are expected to become available commercially in the near future. The oil is squeezed out mechanically by a process that does not distort the shape of the peanut, except for a slight enlargement. In the process, the moisture in the peanuts is increased to a relatively high 6% before pressing; after pressing, the peanuts are soaked in water to restore their original shape. The appearance and flavor of the roasted nuts are practically indistinguishable from the conventional product. The new process reduces the oil content (and therefore the calories) of peanuts by about 80%.

Food Irradiation. The preservation of foods by irradiation moved closer to commercialization in the United States as several major food processors undertook pilot-plant studies. In Canada the application of pasteurizing doses of irradiation to potatoes to inhibit sprouting began on a commercial scale with the new crop.

In the United States the Food and Drug Administration (FDA) approved use of irradiation for sprout inhibition in potatoes, for insect deinfestation of wheat, and for the sterilization of bacon. Another pending use of irradiation is for treating dehydrated vegetables to increase the rate of rehydration.

Packaging. Easy-to-open containers, including cans, bottles, and rigid-foil types, were used originally for packaging beer. Now they are used as containers for soft drinks, cheese spreads, nuts, coffee, frozen citrus concentrates, sardines, and soup mixes. Even heat-retorted foods are being processed successfully in scored-lid cans by means of a modified retorting-cooling cycle that subjects the scored lids to less pressure stresses.

A so-called truth-in-packaging bill, sponsored by Sen. Philip Hart (D, Mich.), would authorize a government agency to establish standard weights for food packages so that shoppers could easily compare prices with units of weight. The present practice in the industry is to use standard package sizes to facilitate mass production; hence, weight per package varies from one product to another. The industry contends that the proposed legislation would sacrifice mass-production savings and require higher prices.

Electronic Heating. Conventional heating in an oven or deep fat fryer poses the problem of controlling time-temperature relationship to end up with the proper moisture content and the desired degree of brownness. These two objectives can now be achieved separately by using conventional heating to obtain the desired degree of brownness, followed by electronic heating to obtain the proper moisture content. (In electronic heating, water molecules of the food preferentially absorb the energy input and become heated so that heating occurs literally from the inside out.) For potato chips a dielectric oven of 30 to 300 megacycles is used; for crackers, a microwave oven of 300 to 3,000 megacycles.

Foodborne-Disease Controls. More stringent microbiological controls by government agencies are in the offing to control the spread of foodborne diseases, such as botulism and salmonella. Milk, of course, is already under such control. In 1965 the U.S. Department of Agriculture issued regulations requiring that egg products from federally inspected plants or those moving in interstate commerce either must be pasteurized or undergo bacteriological tests for certification as free of salmonella.

A lack of information about the significance of various forms of bacteria commonly present in foods, and the number of bacteria that can be tolerated from a public health standpoint, temporarily impede the establishment of more microbiological standards for foods.

THE U.S. FOOD INDUSTRY

	Employees[1]		Value added by manufacture (billions)		Value of shipments (billions)	
Group	1958	1963	1958	1963	1958	1963
Meat and poultry products	312,000	299,000	$2.5	$2.8	$15.9	$16.8
Dairy products	295,000	257,000	2.9	3.2	10.1	11.2
Canned, preserved, and frozen foods	234,000	245,000	2.0	2.8	5.6	7.3
Grain mill products	119,000	114,000	1.9	2.2	6.9	8.2
Bakery products	403,000	281,000	2.6	3.0	5.1	5.6
Sugar (raw and refined)	33,000	32,000	.4	.6	1.5	2.2
Confectionery and related products	80,000	78,000	.8	1.0	1.9	2.2
Beverages, alcoholic and nonalcoholic	207,000	205,000	2.9	3.7	5.4	6.9
Miscellaneous products[2]	135,000	133,000	1.9	2.4	7.2	8.0
Total[3]	1,717,000	1,644,000	$17.7	$21.6	$59.6	$68.3

[1] Excludes employees at central administrative offices, distribution warehouses, and other auxiliary establishments. [2] Includes animal and vegetable oils and fats, roasted coffee, macaroni, potato chips, etc. [3] Details may not add to totals because of rounding. Source: U.S. Bureau of the Census, *1963 Census of Manufactures*.

Food Council of America. In 1965 the Food Council of America was formed by executives of the leading food-industry associations to act as an industry spokesman against attacks by some food faddists, professional consumer councils, and legislators. Its "Food Is A Bargain" advertising campaign pointed out in 1965 that food takes less than 19% of the average consumer's take-home pay.

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FOOTBALL. See SPORTS.

FOREIGN AFFAIRS. See AFRICA; ASIA; EUROPE; FOREIGN POLICY, U.S.; LATIN AMERICA; and the articles on countries.

FOREIGN AID, U.S.

As in recent years, the United States in 1965 used foreign aid as a major instrument to help achieve in less-developed countries its objectives of economic and social development, internal political growth, international cooperation, and the forestalling of Communist military threats. Economic aid was provided by several separate but related U.S. agencies—the Agency for International Development (AID), the Food for Peace Program, the Peace Corps, and the Export-Import Bank of Washington—and by contributions to the United Nations and international financial agencies. U.S. military aid was administered by the Department of Defense.

Net aid expenditures (except for the Peace Corps) from July 1, 1945, to Dec. 31, 1964, totaled $97,283,000,000, including $33,841,000,000 in military grants. The balance consisted of $41,986,000,000 in economic grants; $16,790,000,000 in net economic credits; $3,376,000,000 in other economic aid; and $1,290,000,000 in investments in international financial agencies.

Table 1—NET U.S. OBLIGATIONS AND AUTHORIZATIONS FOR FOREIGN AID

Type or area	Fiscal year 1964 (millions of dollars)	Fiscal year 1965 (millions of dollars)
Capital subscriptions to international organizations:		
Inter-American Development Bank	...	250
International Development Assn	62	62
Total	62	212
Economic and other nonmilitary aid:		
Agency for International Development		
Loans	1,398	1,120
Grants	876	908
Total	2,274	2,027
Food for Peace sales, loans, and grants	1,963	1,612
Export-Import Bank long-term loans	568	522
Latin American Social Progress Trust Fund	38	101
Other U.S. economic aid programs	200	194
Total	5,043	4,457
Military aid grants and loans	1,455	1,269
Total economic and military aid	6,498	5,726
Africa (except United Arab Republic)	410	357
Military grants and loans: goods delivered	26	21
Economic loans, grants, and other aid	384	335
Europe, Eastern: economic aid only	15	7
Europe, Western (including Yugoslavia but not Greece and Turkey)	744	514
Military grants and loans: goods delivered	396	309
Economic loans, grants, and other aid	349	205
Far East and Oceania	1,327	1,458
Military grants and loans: goods delivered	598	704
Economic loans, grants, and other aid	729	755
Latin America	1,332	1,104
Military grants and loans: goods delivered	79	67
Economic grants, loans, and other aid	1,253	1,037
Near East (including Greece, Turkey, and United Arab Republic)	2,273	2,096
Military grants and loans: goods delivered	354	393
Economic loans, grants, and other aid	1,919	1,704
Nonregional	397	203
Total economic and military aid	6,498	5,726

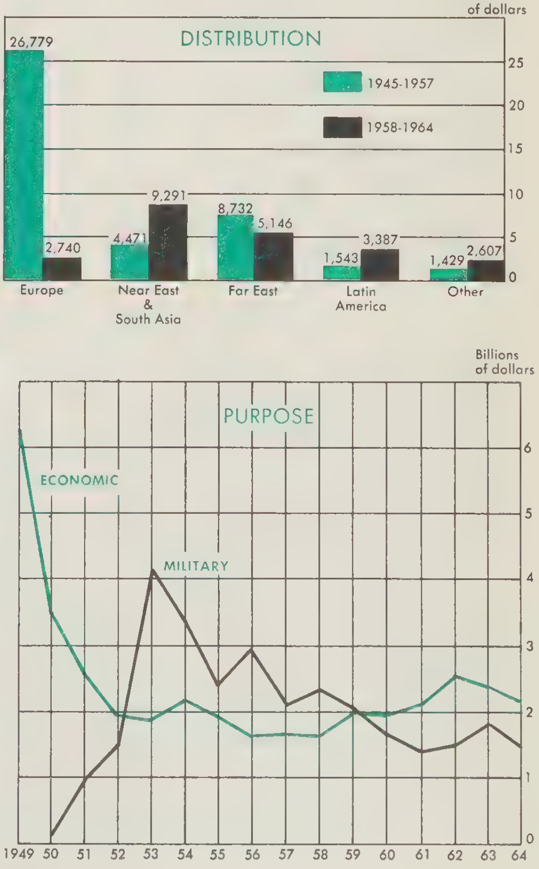
Note: Figures are preliminary, subject to change. Items may not add to totals because of rounding. (Source: Office of Statistics and Reports, Agency for International Development.)

Aid Policies in 1965. The U.S. government gave special attention to the serious but controversial issue of rising populations in the less-developed countries because the increased needs of these growing populations can almost cancel out development efforts. President Johnson, for the first time, officially announced that U.S. aid would deal with the world population explosion. In February, AID made a $400,000 grant to establish a Latin American center to study population growth. There were also reports that the president would soon propose an expanded Food for Peace Program to help feed rising populations until local food output increased. The successful economic aid program for Nationalist China, formerly a major aid recipient, ended on June 30, but military aid continued.

The aid program of the Alliance for Progress in Latin America showed progress, with member nations meeting or exceeding their pledged development contributions. (For the second year, Latin America achieved the goal of a 2.5% per capita gross economic growth rate, and most countries began economic planning and tax and land reforms.) Alliance programs touched the daily lives of nearly half of Latin America's 200 million people.

In Latin America, as in all less-developed countries, two major problems were sharply defined. First, fluctuating and usually falling prices for exported raw materials often resulted in losses equal to the aid received. Second, the repayment of debts became increasingly burdensome (70% of economic aid is now in loans). An AID report in July showed that debt service totals $5 billion a year, and offsets 30% of all aid received.

Foreign aid was involved in the year's major international crises. In a speech in April concerning the war in Vietnam, President Johnson called for a Southeast Asian regional development program, including the formation of an Asian development bank. He committed the United States to give the overall program $1 billion over an unspecified period of time, to help achieve cooperation and peace in


U.S. FOREIGN AID

the area. The president said that North Vietnam would be eligible to receive some of this aid.

A meeting at Manila in December formally established the Asian Development Bank. It was capitalized at $1 billion, of which the United States pledged $200 million. Membership is open to all countries in the United Nations or its agencies, which means that Communist China, North Korea, and North Vietnam are ineligible.

Table 2—NET U.S. EXPENDITURES FOR FOREIGN AID

Type or area	Calendar year 1963 (millions of dollars)	Calendar year 1964 (millions of dollars)
Investment in international institutions:		
Inter-American Development Bank	...	50
International Development Assn.	62	62
Total	62	112
Economic and other nonmilitary aid:		
Net grants	1,894	1,884
Net credits:		
New credits	2,119	2,238
Minus collections of principal	963	691
	1,156	1,547
Net other assistance		
Gross sales (foreign currency acquired)	1,287	1,396
Minus foreign currencies disbursed	996	1,424
	291	−28
Total, nonmilitary aid	3,341	3,515
Military aid, net grants	1,721	1,200
Total, nonmilitary and military aid	5,062	4,715
Europe, western (including Yugoslavia, but not Greece and Turkey)	212	354
Military grants	469	230
Other grants, credits, and other aid	(−)257	124
Europe, eastern (grants, credits, and other assistance)	40	46
Near East (including Greece, Turkey, United Arab Republic) and South Asia	2,147	2,052
Military grants	424	273
Other grants, credits, and aid	1,723	1,780
Africa (except United Arab Republic)	330	323
Military grants	32	32
Other grants, credits, and aid	298	291
Far East and Pacific	1,462	1,146
Military grants	706	585
Other grants, credits, and aid	756	561
Latin America	617	489
Military grants	63	54
Other grants, credits, and aid	554	434
Other Western Hemisphere economic aid	13	11
International organizations and unspecified areas	240	183
Military grants	27	26
Other grants, credits, and aid	212	157

Source: Office of Business Economics, U.S. Dept. of Commerce.

Aid to the Dominican Republic was suspended in May as a result of the civil war which erupted in that country. Aid was resumed on September 5 with the announcement that the United States might provide $100 million by the end of 1966 to help the new provisional government rehabilitate the war-torn country.

In September, military aid shipments to India and Pakistan were cut off, and economic aid was slowed down, because of the reported use by both countries of U.S. military aid in their three-week war over Kashmir.

Export-Import Bank. A wholly owned U.S. government corporation, the Export-Import Bank of Washington engages in three major types of operations to finance increased U.S. exports: loans to foreign borrowers, credit insurance for U.S. exporters, and guarantees to U.S. commercial banks. Authorizations in fiscal year 1965 totaled $1.86 billion. Of this amount, $435 million was used for long-term dollar-repayable loans, mostly bearing 5.5% interest, with repayment periods of from 8 to 15 years. About two thirds of these went to meet the capital needs of less-developed countries, principally in Latin America, which can accept "harder" terms than those prevailing for AID loans.

Foreign Aid Program for Fiscal Year 1966. In adopting the aid program for 1966, Congress made fewer changes in the president's proposals than in any other recent year. In his annual foreign aid message to Congress (Jan. 14, 1965), President Johnson did not ask for any basic changes in aid policy, although there was a slight intensification of existing policies. He requested appropriations of $3,380 million—$1,170 million for military aid and $2,210 million for economic aid—slightly less than that requested for 1965, and the smallest sum since the Marshall Plan began in 1948. (See Table 3 for details.)

In a special aid message on June 3, 1965, the president requested an extra $89 million for economic aid to Southeast Asia. Congress approved this request and incorporated it in the general aid bill. However, it did not grant the unlimited authorization for aid to Vietnam that had been requested.

Aid in 1966 was to be concentrated in a few countries where it would do the most good. Eleven nations exposed to aggression by Communist countries, in an arc extending from Greece to Korea, were to receive 72% of the military aid. South Vietnam, Laos, Korea, and Jordan would receive 88% of military-support types of economic aid. Countries making maximum self-help efforts—India, Brazil, Turkey, Chile, Nigeria, and Tunisia—were to be given 74% of the development loans. The program also continued the recent trend of providing mostly economic rather than military aid. Two thirds of U.S. aid in 1966 was for economic development. (In 1956, two thirds went for military purposes.)

Table 3—U.S. FOREIGN AID REQUESTS AND APPROPRIATIONS FOR FISCAL YEAR 1966

	Requested (millions of dollars)	Appropriated (millions of dollars)
Development loans	$ 780.3	$ 618.2
Technical cooperation and development grants	210.0	202.4
Alliance for Progress:		
Development Loans	495.1	435.1
Technical cooperation and development grants	85.0	75.0
Supporting assistance	369.2	369.2
Contingency fund:		
General	50.0	50.0
Southeast Asia	89.0	89.0
International organizations and programs	145.6	144.8
American schools and hospitals abroad	7.0	7.0
Surveys of investment opportunities	...*	...*
Administrative expenses:		
Agency for International Development	55.2	54.2
State Department	3.1	3.1
Military assistance	1,170.0	1,170.0
Total	$3,459.5	$3,218.0

* Unobligated balance as of June 30, 1965, continued available for funding programs in fiscal year 1966.

More aid was to go through international financial agencies, and other developed countries were to be asked to increase their aid efforts. Also, in line with an increased emphasis on enlisting private enterprise in development activities, guarantees for new U.S. private investments in less-developed countries were increased from $2.5 billion to $5 billion. In a separate bill the president asked for authorization to give U.S. businesses an investment tax credit in proportion to their investments in less-developed countries. (AID's Advisory Committee on Private Enterprise in Foreign Aid, headed by Arthur Watson of the International Business Machines Corporation, recommended the tax-credit plan in its July 1965 report.) Congress did not act on this plan, however.

In another bill the president asked approval of a U.S. three-year authorization of $750 million for the Inter-American Development Bank. Congress approved and appropriated the first installment of $250 million. It also appropriated $104 million to the International Development Association.

The funds appropriated for foreign aid in the Foreign Aid and Related Agencies Appropriations Act totaled $3,218 million, or $32 million more than the total for 1965 and only 6.9% less than the total requested. The main amendments initiated by Congress in the aid bills were the imposition of flexible restrictions on aid to the United Arab Republic, to countries that traded with North Vietnam, and to countries that permitted, or failed to take adequate steps to prevent, the destruction of U.S. property by mob violence.

The Senate tried to pass a two-year aid authorization, instead of the usual one-year bill, with the aim of recasting the whole program in two years after a full reevaluation. This attempt failed, however, because of opposition by the House.

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FOREIGN INVESTMENTS

The record rise of private capital outflow to nearly $6.5 billion was a major feature of the U.S. balance of payments in 1964. All components of capital outflows, except purchases of foreign securities, moved upward in the year. Direct investments were up $0.4 billion to $2.4 billion; net lending by banks rose by about $1 billion to $2.5 billion, and loans and acquisitions of short-term assets abroad by nonfinancial firms increased to $0.9 billion. Purchases of foreign securities were inhibited by the Interest Equalization Tax (IET) and were reduced to a net of $0.7 billion. Long-term government credits and claims rose by more than $1.6 billion, but short-term government claims dropped by $100 million.

These capital outflows, together with reinvested direct investment earnings of $1.4 billion, gains in market prices of foreign securities, and sizable additions to foreign assets resulting from improved reporting by some banks and business firms, raised the accumulated total U.S. foreign investments to nearly $99 billion, and the total of private investments to over $75 billion by the end of 1964.

The data on capital flows for the first half of 1965 show that after the announcement of the government's program to improve the balance of payments, banks acted quickly to cut back their foreign lending, and business firms repatriated a large part of their liquid funds held outside the United States. However, industrial companies had planned a considerable increase in spending for foreign investments in 1965 and 1966. Consequently, direct-investment capital outflows in the first six months of 1965 were $2.1 billion, or double the amount for the first six months of 1964. However, because of the special nature of some of these outflows in early 1965, and because of attempts to substitute foreign financing for U.S. funds, the capital outflows in the second half of 1965 were expected to be considerably lower than those for the first half of the year.

Late in 1965, the U.S. government announced new guidelines for companies with sizable direct foreign investments. The voluntary program for 1966 would include the provision that direct investments for 1965 and 1966 be limited to 90% of the amount during the period from 1962 through 1964. This formula would permit a direct investment rate for 1965 and 1966 of about 35% above the annual average of the 1962–64 period. It would result in about $2.4 billion of new direct investments in 1966, a $1 billion cut below the 1965 outflows.

Direct Foreign Investments. U.S. company investments in Europe accounted for nearly half of the additions to direct investments in 1964 (capital flows and retained earnings), and about the same proportion in early 1965. In 1964, the figure included over $300 million to acquire existing foreign interests. Of the $1.7 billion added to the value of direct investments in Europe in 1964, $0.9 billion went to the Common Market countries, $0.4 billion went to the United Kingdom, and $0.4 billion to other European countries. Preliminary data for the first half of 1965 show capital outflows to Europe well ahead of those in the first half of 1964. Investments in manufacturing rose by $900 million in 1964; nearly two thirds went to the Common Mar-

INTERNATIONAL INVESTMENT POSITION OF THE U.S.
(By area and type of investment, 1963–1964, in millions of dollars)

		Year-end 1964[2]					
Type of investment	Year-end 1963[1]	Total	Western Europe	Canada	Latin American Republics	Other foreign countries	International institution
U.S. investments abroad, total	88,301	98,720	27,801	24,596	17,335	24,211	4,777
Private investments	66,513	75,419	19,529	24,591	13,798	14,598	2,903
Long-term	58,330	64,731	17,484	22,597	11,218	10,529	2,903
Direct investments	40,686	44,343	12,067	13,820	8,932	7,661	1,863[4]
Foreign dollars bonds	7,335	8,218	779	4,474	556	1,369	1,040
Other foreign securities[3]	5,964	6,248	2,095	3,658	234	261	...
Other investments	4,345	5,922	2,543	645	1,496	1,238	...[5]
Short-term	8,183	10,688	2,045	1,994	2,580	4,069	...[5]
U.S. government credits and claims	21,788	23,301	8,272	...[5]	3,537	9,613	1,874
Long-term[6]	17,149	18,772	7,356	...	3,298	7,018	1,100
Short-term	4,639	4,529	916	...[5]	239	2,595	774
Foreign assets and investments in the U.S., total	51,486	56,842	33,363	8,304	5,461	6,976	2,738
Long-term investments	22,791	24,979	17,726	4,187	1,686	1,168	212
Direct investments	7,944	8,363	5,819	2,284	134	126	...
Corporate stocks	12,485	13,835	10,159	1,726	1,077	793	80
Corporate, state and municipal bonds	702	922	663	...[5]	80	49	130
Other investments	1,660	1,859	1,085	177	395	200	2
Short-term assets and U.S. government obligations	28,695	31,863	15,637	4,117	3,775	5,808	2,526
Private obligations	14,892	17,499	7,089	2,202	3,340	4,442	426
U.S. government obligations	13,803	14,364	8,548	1,915	435	1,366	2,100
Long-term	3,635	3,845	1,825	1,019	81	93	827
Short-term	10,168	10,519	6,723	896	354	1,273	1,273
Net debtor (—) or creditor (+) position	+36,815	+41,878	— 5,562	+16,292	+11,874	+17,235	+2,039

[1] Revised. [2] Preliminary. [3] Consists primarily of securities payable in foreign currencies, with some dollar obligations, including participation in loans made prior to 1963 by the International Bank for Reconstruction and Development. Effective 1963, participation in IBRD loans are included under *Other investments*. [4] Represents the estimated investment in shipping companies registered primarily in Panama and Liberia. [5] Negligible. [6] Excludes World War I debts that are not currently being serviced. Source: U.S. Department of Commerce, Office of Business Economics.

ket countries, and most of the remainder was invested in the United Kingdom.

Canada. Direct investments in Canada rose by $750 million in 1964. Net capital outflows totaled only $250 million, and additional investment was financed out of retained earnings.

Other Countries. U.S. companies also raised the rate of their new investments in other developed countries, principally Australia and Japan, but held to the relatively low level of recent years for investments in the Republic of South Africa. In Australia, where manufacturing investments have been growing quite vigorously, recent projections of expenditures for new plants indicate some acceleration of U.S. investments.

Direct investments in the less-developed countries —Latin America, Africa (excluding the Republic of South Africa), and Asia (excluding Japan)—rose by $0.8 billion. Nearly 70% of new investments were in the Western Hemisphere, but they were limited largely to a few of the Latin American countries. Investments, especially for manufacturing, rose notably in Mexico.

Earnings and Income. In 1964, earnings of foreign affiliates of U.S. firms rose by a record $530 million to $5.1 billion. Manufacturing operations accounted for $0.3 billion of the increase and brought total industry earnings to $1.8 billion. Earnings of mining operations registered substantial gains, mainly in Canada and Latin America, but foreign earnings of the petroleum industry advanced little in 1964.

Income return from these foreign affiliates in the form of dividends, interest, and branch profits, rose even more rapidly than earnings. These receipts amounted to $3.7 billion in 1964, a gain of $0.6 billion over 1963. Income from petroleum operations rose to $1.9 billion, manufacturing affiliates paid out $0.9 billion, and mining operations returned $0.4 billion. Other industry groups accounted for the remaining $540 million.

Other Foreign Investments. Purchases of new foreign issues in the United States amounted to $1.1 billion in 1964 and $632 million in the first half of 1965. Canada continues to raise a considerable amount of capital through this channel, but issues of European and other countries have become inconsequential because of the interest equalization tax. U.S. investment firms have been active in placing new foreign securities in European markets, and a number of such issues in the U.S. market have been sold entirely to foreign investors. On balance, U.S. investors have been liquidating their holdings of foreign securities.

Foreign Investments in the United States. Capital inflows from foreign investors totaled $110 million in 1964. In the first half of 1965 there was a negligible net inflow. Foreign investors liquidated holdings of U.S. securities, mainly for British account, but they increased funds held in long-term time deposits in the United States. Much of this increase was the temporary investment of the proceeds of the sale of U.S. securities. There also has been a small net outflow of direct investment capital in recent years ($5 million in 1964). Despite these liquidations, the value of foreign holdings of corporate U.S. stocks increased because of improvement in market prices. (See also BANKING; INTERNATIONAL FINANCE.)

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YOICHI OKAMOTO

U.S. POLICY IN VIETNAM is discussed by President Johnson (right) and his principal advisers: (l. to r.) Secretaries Robert McNamara and Dean Rusk, and McGeorge Bundy.

FOREIGN POLICY, U.S.

U.S. foreign policy in 1965 was marked by the most extensive controversy since the Korean War. The country seemed to be divided between advocates of a policy placing the containment of communism above all other considerations, and those who favored an internationalist policy to relax tensions. The former group believed that the United States should assume "great power responsibility" to intervene politically or militarily in support of American concepts of democracy and anticommunism wherever they seemed to be threatened. The latter critics advocated that the United States should pursue policies of international cooperation leading toward a world of peacefully coexisting states.

While maintaining an internationalist position in principle, the United States government in 1965 resorted to force in order to halt revolutionary movements believed to be Communist inspired in some unstable countries. By pursuing policies believed to be required by its "great power responsibility," the United States faced the danger of escalating civil strife in Vietnam into a world war. It also found itself opposing the right of self-determination by intervening in the Dominican Republic.

The year began with an optimistic American public believing that President Lyndon B. Johnson, who had been overwhelmingly elected in November 1964 on a foreign policy program of peace and international cooperation, would help to make the year one of significant progress toward a stable and peaceful world. But the world was far from tranquil. Hostilities existed in Malaysia, Yemen, South Arabia, Sudan, the Congo (Léopoldville), and South Vietnam.

Since 1954 the United States helped South Vietnam defend itself against the indigenous Vietcong (Communist) guerrillas, who were aided by North Vietnam. However, it came as a surprise to the American people when the Johnson administration, in February 1965, ordered the bombing of North Vietnamese bridges and installations. The United States sent Marines and other forces to engage

TEACH-IN DEBATE on U.S. policy in Vietnam took place in Washington, May 5. Historian Arthur M. Schlesinger, Jr. (standing) speaks in favor of U.S. policy. Opposed were (l. to r., at table) British writer Isaac Deutscher and Hans Morgenthau of University of Chicago.

UPI

directly in the hostilities against the Vietcong. In April the United States intervened in a civil war in the Dominican Republic by sending a large contingent of Marines to prevent a possible Communist takeover. These actions stirred up controversy and resulted in a great public debate on United States foreign policy.

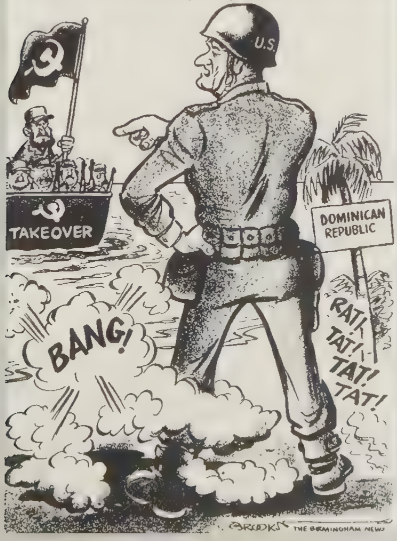
Involvement in Vietnam. The United States had increased its involvement in South Vietnam by gradually raising the number of its military advisers there from 685 in 1961 to about 23,000 by the beginning of 1965. The escalation of the hostilities in 1965 was rapid. After Vietcong forces attacked the American base at Pleiku in South Vietnam in February 1965, the United States retaliated by bombing North Korean staging areas, bridges, and installations north of the 17th parallel. By its action the United States hoped to stop the infiltration of men and arms from North Vietnam to the Vietcong guerrillas in South Vietnam. Contingents of American Marines and ground forces were sent in increasing numbers, and totaled some 75,000 men by July. After suspending its air raids for about a week in May in the hope of encouraging "unconditional negotiations," the United States renewed them by utilizing long-range jets based in Guam and Okinawa. The attacks approached Hanoi, capital of North Vietnam.

The official American government position was set forth in a white paper issued by the Department of State in February 1965. According to this document, North Vietnam was guilty of aggression against South Vietnam because it had infiltrated guerrillas and arms to aid the Vietcong; South Vietnam was engaged in "self-defense against armed attack"; and the United States was assisting South Vietnam at the latter's request through "collective self-defense," as permitted by Article 51 of the United Nations Charter. All that was necessary to stop the war, as Secretary of State Dean Rusk has said, was for North Vietnam to stop its assistance to the Vietcong and to "let its neighbors alone."

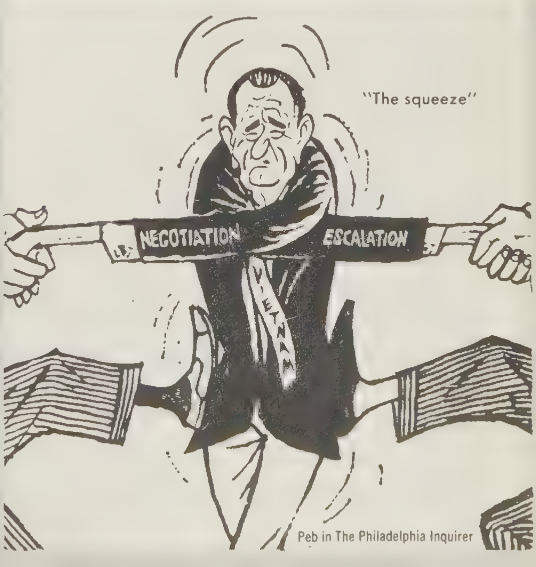
President Johnson, in an important address at Johns Hopkins University on April 7, expressed the determination of the United States to defend the independence of South Vietnam. He told his audience that this independence had been pledged by the Eisenhower and Kennedy administrations, as well as by his own. He said that the United States was prepared to negotiate unconditionally to end hostilities with North Vietnam, but would not negotiate directly with the Vietcong because the guerrillas were only an arm of the North Vietnamese government. Furthermore, he said that the United States would contribute $1 billion to rehabilitate and develop Southeast Asia after peace was restored. The president further emphasized negotiations in his address to the United Nations Conference at San Francisco on June 25.

After consulting with his principal advisers for a week in late July, President Johnson ordered an immediate increase in United States fighting

"There's been a change in plans—turn around"

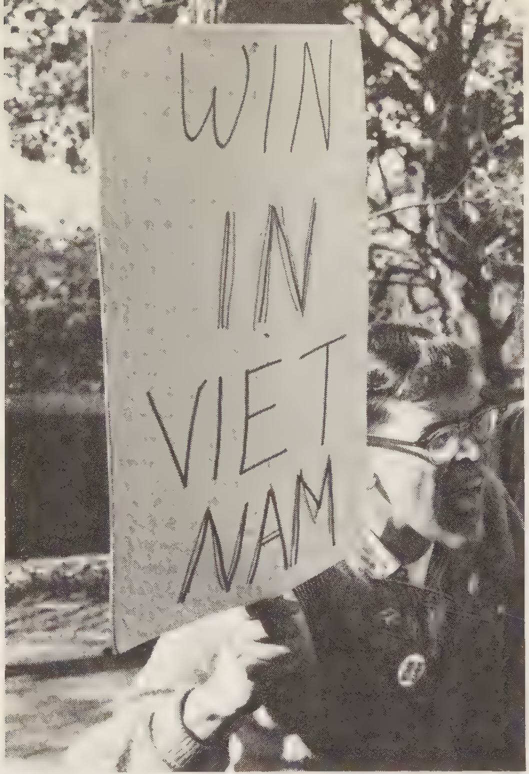


BROOKS THE BIRMINGHAM NEWS



"The squeeze"

Peb in The Philadelphia Inquirer



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HECKLER at Vietnam peace march in New York, Oct. 16, voices disagreement with critics of U.S. military policy.

strength in Vietnam from 75,000 to 125,000 men. The American obligation to South Vietnam, Chinese aggressiveness, the necessity of containing communism in Asia, and the national security seemed to President Johnson to require and to justify the escalation of the war in Vietnam in order to maintain the honor, credibility, and security of the United States. He emphasized "American willingness to begin unconditional discussions with any government, at any place, at any time." The president said that he was ready to discuss proposals that North Vietnam had made for ending the war, and he indicated that the Vietcong might be represented in negotiations by one of the participating governments. (See also ASIA; JOHNSON, LYNDON BAINES; VIETNAM.)

The Public Debate on Vietnam. American opinion became increasingly concerned and divided as escalation of the war in Vietnam proceeded in 1965 and the prospect of a full-scale war on the Asian mainland emerged. There were four alternative policy proposals: (1) withdrawal; (2) escalation; (3) negotiation; and (4) support of the president's policy.

Very few persons favored simple withdrawal, but many critics, including Democratic Senators Wayne Morse of Oregon and Ernest Gruening of Alaska, newspaper columnist Walter Lippmann, and Professor Hans J. Morgenthau of the University of Chicago, expressed the view that no substantial American interest was involved in Vietnam. They believed that a full-scale land war in Asia would be catastrophic, and that United States intervention was legally and morally unjustifiable and politically inexpedient. They recommended that compromises should be made with a view to disengaging the United States from Vietnam as rapidly as might be possible with a minimum loss of face.

At the opposite extreme, Republican presidential candidate Barry Goldwater, Republican House leaders Gerald Ford and Melvin Laird, Democratic Senator Gale McGee of Wyoming, New York *Times* columnist Hanson Baldwin, and others seemed to favor escalation of the war in order to contain communism behind the 17th parallel in Vietnam. Advocates of this point of view considered the containment of communism the primary goal of United States foreign policy.

Between the two extremes were critics like Democratic Senator J. William Fulbright of Arkansas, chairman of the Foreign Relations Committee. In a notable speech to the Senate on June 15, Fulbright said that a complete military victory in Vietnam could not be gained without prohibitive costs, but that the unconditional withdrawal of American forces would have disastrous consequences. He recommended that the United States try to "end the war at the earliest possible time by a negotiated settlement involving major concessions by both sides" based on the Geneva accords of 1954. Senator Fulbright's view was shared by some other congressional leaders.

Academic discussion groups or "teach-ins" were organized by several university groups during the spring of 1965 to debate the pros and cons of American policies in Vietnam. The discussions indicated the great anxiety over the situation that existed among academic people generally. A national teach-in, held in Washington, D.C., on May 15–16, attracted an audience of 5,000 persons, and was participated in by government officials and leading educators.

One of the administration's chief spokesmen at some teach-ins was McGeorge Bundy, a principal foreign policy adviser to President Johnson. He defended the president's policy on grounds that the United States had committed its honor to defend South Vietnam, and that the national interest required the continuing containment of communism, especially Chinese communism with its expansive ambitions and increasing military capabilities. (Later, Bundy announced that he would leave the post to become president of the Ford Foundation on Feb. 28, 1966.)

Opposition critics at the teach-ins often emphasized the lack of a vital interest of the United States in Southeast Asia. Many took issue with the "domino theory" that if one independent state in Southeast Asia fell, then all would fall like a row of dominoes. This theory suggested an indefinite expansion of communism if South Vietnam went Communist. These critics pointed out that as Ho Chi Minh was a nationalist as well as a Communist, he probably would seek to prevent Chinese control of Vietnam, just as his countrymen had resisted Chinese domination for centuries.

Many international lawyers argued that the United States had no commitment to defend South Vietnam, and that intervention was illegal unless the United Nations found that the situation threatened a general war. They believed that the United States could promote stability in Asia by adhering to United Nations principles of self-determination of peoples and nonintervention in the domestic affairs of other countries, and by giving economic aid to Asian nations.

Many critics emphasized the moral aspects of the situation in Vietnam. They criticized the barbarities of guerrilla warfare and the increasing atrocities against civilians by both sides; the mounting American casualties (totaling over 3,700 by October 1965 and including over 1,000 dead), in addition to thousands of Vietnamese dead; and the danger of escalating the conflict into World War III. Most of the critics said that military victory was impossible without an all-out war, and that with it, victory would be meaningless.

The Dominican Republic. United States military intervention in the Dominican Republic in 1965 caused less anxiety than the situation in Vietnam because there was less danger of an indefinite escalation into a world war. Criticism of the Johnson administration's policy on legal, moral, and political grounds was similar to the criticism of United States policies in Vietnam.

The United States had favored the democratic government of Dominican President Juan Bosch, who had been overthrown by a military junta in 1963. After a revolution aimed at restoring him to office broke out in Santo Domingo in April 1965, President Johnson was informed that some Communists were active in the revolution and were supported by Premier Fidel Castro of Cuba. On April 28 the president, after brief consultation, sent a contingent of Marines to the Dominican Republic to protect Americans. Later he sent a larger force to try to end the civil strife. The United States professed the military objectives of establishing a zone separating the factions and of ending the hostilities. But by its intervention the United States appeared to favor the Dominican military junta over the rebels.

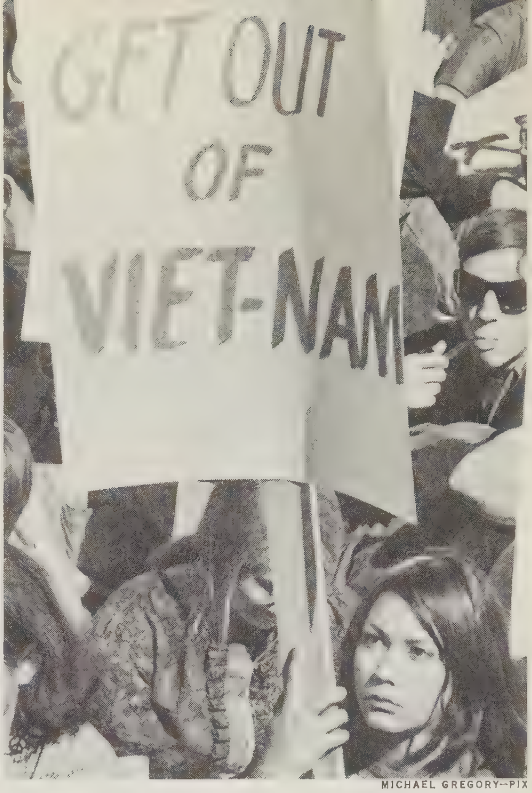
The Consultative Committee of the Organization of American States (OAS) supported the United States intervention and proposed to change it to an OAS operation. Contingents were sent to the Dominican Republic by a few Latin American countries, but control of the military force remained with the United States. The hostilities had caused extensive destruction of life and property and an economic collapse in Santo Domingo. But by midsummer a cease-fire took effect. In September a provisional government was established through the efforts of an OAS mediating commission.

Many Latin Americans and some foreign policy critics in the United States believed that the unilateral intervention by the United States violated both the UN Charter and the OAS Charter, as well as other inter-American treaties forbidding unilateral intervention of any kind and for any purpose. However, some OAS resolutions had provided for consultation and possible OAS action to prevent Communist infiltration into the Western Hemisphere.

The Johnson administration appears to have been motivated by the fear that communism might expand in the Caribbean area. The United States therefore acted in accordance with the principles of the Monroe Doctrine to prevent foreign domination of the Dominican Republic. (See DOMINICAN REPUBLIC; LATIN AMERICA.)

The NATO Alliance. The problem of the cold war in Europe and the viability of the North Atlantic Treaty Organization (NATO) continued to concern United States policymakers in 1965. Despite the dilemma in which American intervention in Vietnam had placed the Soviet Union, the latter seemed willing to continue the present *détente* with the United States. The Soviet Union continued to oppose the American proposal for a multilateral nuclear force under NATO, as did France and some other NATO members. The United States did not press the proposal during the year.

The French view that NATO is obsolete has gained some adherents in the United States. These proponents argue that NATO is unnecessary because the danger of a Soviet attack on the West has receded; that the European states will continue to demand independent nuclear capabilities; and that NATO diverts attention from the United Nations and weakens it. In spite of this widespread skepticism and President de Gaulle's threat to take France out of NATO in 1969, the United States continued to favor policies for strengthening the NATO alliance. (See also EUROPE; NORTH ATLANTIC TREATY ORGANIZATION.)



MICHAEL GREGORY—PIX

DEMONSTRATORS in San Francisco in mid-October protest against U.S. military involvement in Vietnam conflict.

United Nations. An important development in United States foreign policy was the sudden death in London on July 14 of Adlai E. Stevenson, the able United States representative to the United Nations. He was succeeded by Arthur Goldberg, who resigned from the Supreme Court to accept the post. In his first official speech before United Nations delegates, Ambassador Goldberg declared that the United States would no longer insist that the Soviet Union and some other nations must be penalized for failing to pay their share of the costs of past UN peace-keeping forces. He said the United States would not try to frustrate the general consensus of the members that the work of the UN General Assembly should proceed normally. (See also GOLDBERG, ARTHUR; STEVENSON, ADLAI EWING.)

President Johnson renewed expressions of United States allegiance to the United Nations at the conference which met in San Francisco on June 25–26 to celebrate the organization's 20th anniversary. The United States fully supported the Security Council's arrangements for a cease-fire in Kashmir between Indian and Pakistani forces in September. The United States had halted its military aid to both countries after the fighting in Kashmir began. (See also UNITED NATIONS.)

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FOREIGN TRADE. See INTERNATIONAL TRADE.

FORESTRY AND LUMBERING

A comprehensive appraisal of timber resources in the United States highlighted the year 1965 in forestry developments. The year was marked also by the inauguration of a study of laws and practices relating to federal land in the public domain and by an expansion of research efforts in forestry.

Timber Resources. A nationwide study of timber resources, conducted by the Forest Service of the U.S. Department of Agriculture, showed that forests in the United States occupy 759,000,000 acres, or one third of the total land area in the 50 states. Of this forest land, 509,000,000 acres were classified as commercial, including 208,945,000 acres of sawtimber stands; 264,367,000 acres of young growth pole, seedling, and sapling stands; and 35,533,000 acres of nonstocked land. The study revealed that though total annual growth exceeds the total annual timber cut, the supply of large trees and better quality timber is declining.

Public Lands. In 1965 the Public Land Law Review Commission, under the chairmanship of Representative Wayne N. Aspinall of Colorado, began a three-year study of the laws and practices governing the administration of the 710,000,000 acres of federal forests and related wild lands in the public domain. The commission's recommendations should lead to a general overhauling and updating of laws and policies for management of these lands. In addition to Chairman Aspinall, the commission consisted of five senators, six representatives, and six citizens appointed by the president.

Forest Service Operations. For the operation of the Forest Service in the fiscal year beginning July 1, 1965, Congress appropriated $296,372,000 in regular funds, an increase of nearly $18.8 million over the previous fiscal year. The total included $162,318,000 for national forest protection and management, $78,672,000 for national forest roads, $36,689,000 for forest research, and $17,513,000 for federal cooperation with states and private forest owners.

Appropriations were earmarked for construction of a new forestry services laboratory at Missoula, Mont.; a forest engineering laboratory at Houghton, Mich.; a naval stores and timber laboratory at Olustee, Fla.; a silviculture laboratory at Sewanee, Tenn.; a tree seed laboratory at State College, Miss.; and a headquarters for the Rocky Mountain Forest and Range Experiment Station at Fort Collins, Colo.

The total area of national forests, national grasslands, and other lands administered by the Forest Service was 186,203,183 acres on July 1, 1964. From that date until June 30, 1965, timber harvested from the national forests under sustained-yield management plans totaled a record 11,240 million board feet.

In 1965 the Forest Service invited bids for the purchase of 8,750 million board feet of timber on the North Tongass National Forest in Alaska. This proposed sale, one of the largest national forest timber sales ever proposed, called for a 50-year cutting period and required the installation of a new pulp mill.

In 1964 the Forest Service reported that over 134 million persons took advantage of the recreational opportunities of the national forests.

Forest Fires. In the national forests, a total of 5,406 fires burned 49,491 acres in January–July 1965, compared with an annual average of 6,568 fires that burned 118,264 acres in the corresponding periods of the preceding five years. In May a fire swept 16,000 acres in Nebraska National Forest, destroying timber and grass that had been planted to protect lands in the sandhills. In August a fire blackened more than 11,000 acres of timberland in Washington County, Maine. This was Maine's worst woodland fire since the Bar Harbor holocaust of 1947.

For the United States as a whole, 116,358 fires burned 4,197,309 acres in the fiscal year 1964. In Canada, the Department of Forestry reported that 7,670 fires burned 470,001 acres in the fiscal year 1963.

Lumber. Lumber production in the United States in the fiscal year 1964 totaled 35,408 million board feet. This figure was higher than the postwar low of 32,000 million board feet in 1961, but lower than the postwar high of 38,200 million in 1956. Softwood lumber output, which accounted for more than 80% of total U.S. lumber production in 1964, increased 6.1% over 1963; hardwood production decreased 12.4%.

United States imports of lumber in 1964, according to the Department of Commerce, amounted to 5,222 million board feet, as against the record 5,335 million in 1963. Imports in 1964 included 4,913 million board feet of softwood lumber and 305 million of hardwood. United States exports in 1964 totaled 956 million board feet, up 9.3% from the 1963 total. This total included 797 million board feet of softwood lumber, 135 million of hardwood lumber, and smaller amounts of railroad ties and box shooks.

According to the Bureau of Labor Statistics, the wholesale price index of lumber increased from an average of 98.9 for 1963 to 100.7 for 1964 (1957–59 = 100). The postwar peak of 104.6 was reached in 1956. There were 321,500 full- and part-time workers in U.S. sawmills, planing mills, and logging camps in March 1965, as against 313,200 workers in March 1964.

In Canada, total lumber production in 1963 was 9,621 million board feet. According to the Department of Forestry, about 95% of this total output was softwood lumber. Two thirds of Canada's total production was exported.

The estimated world production of sawed wood in 1963 was a record 350 million cubic meters (1 cubic meter equals 424 board feet), according to the UN Food and Agriculture Organization. About four fifths of this total was softwood lumber. The Soviet Union led in production, followed by the United States, Japan, and Canada.

UNITED STATES LUMBER PRODUCTION, 1963–64

Regional Types	1963	1964
	(million board feet)	
Southern pine	6,013	6,346
Douglas fir	8,279	8,967
Western pine	9,984	10,579
California redwood	2,235	2,235
Other softwoods	1,310	1,390
Total softwoods	27,821	29,517
Southern hardwoods	3,645	3,194
Appalachian hardwoods	1,205	1,244
Other hardwoods	1,875	1,453
Total hardwoods	6,725	5,891

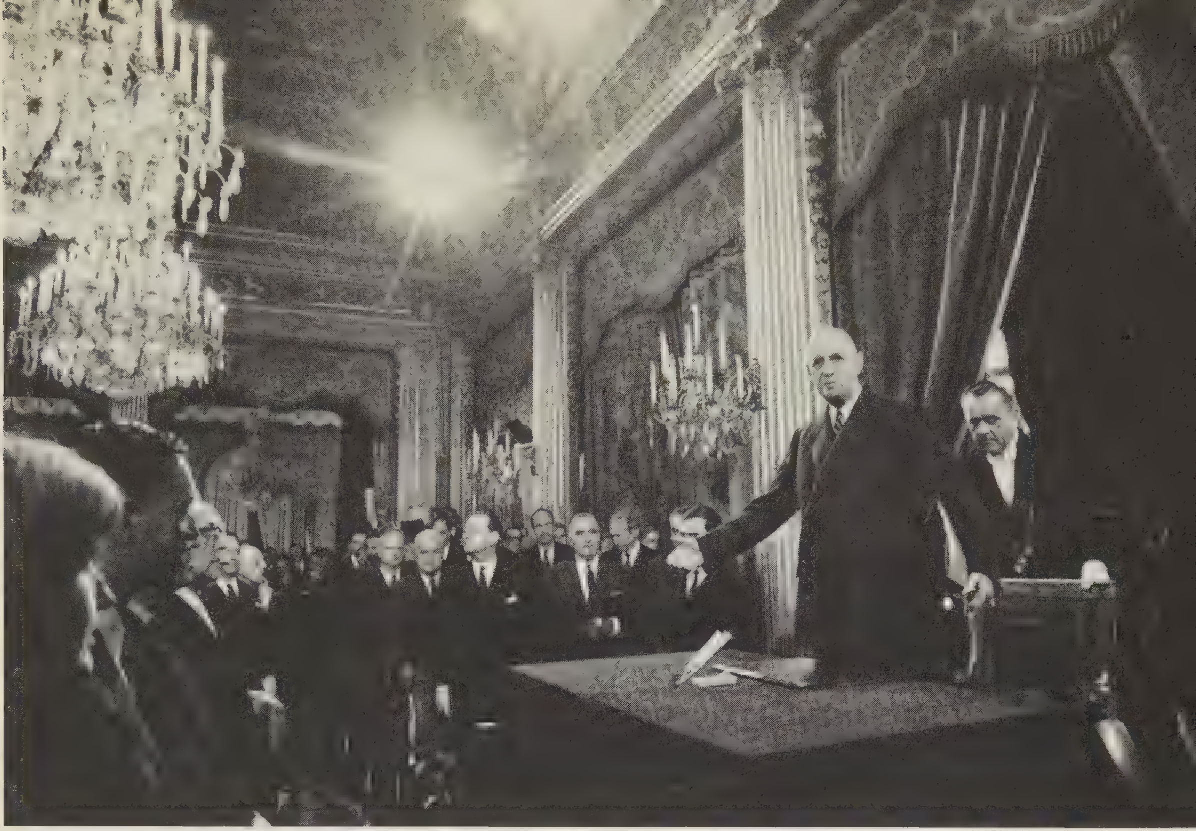
CHARLES E. RANDALL
Forestry Information Specialist
Formerly with U.S. Forest Service

FORMOSA. See CHINA—*Nationalist China.*

FORTAS, Abe. See biographical sketch under SUPREME COURT.

FOUNDATIONS AND TRUSTS. See PHILANTHROPY; and names of organizations under SOCIETIES AND ORGANIZATIONS.

FOWLER, Henry H. See biographical sketch under UNITED STATES.



PICTORIAL PARADE

PRESIDENT DE GAULLE meets the press on September 18 at the Élysée Palace, but postpones announcing his candidacy for reelection for two months.

FRANCE

Although 1965 was a presidential election year, the French seemed content to let President Charles de Gaulle speak for the nation until shortly before the December 5 balloting. Late in November, however, political opposition—heretofore fractured and incoherent—crystallized, and a strong contender appeared in the person of François Mitterrand, the candidate of the "united left." Suddenly the Gaullist domestic and foreign policies became campaign issues, as opponents attacked the president's conception of "elective monarchy." For the first time in several years, it became apparent that de Gaulle's nationalistic stand on NATO (the North Atlantic Treaty Organization) and EEC (the European Economic Community, or Common Market) did not have the backing of 50 million Frenchmen.

In the end, the French chose stability and continuity by electing President de Gaulle to a second seven-year term, but he did not get the "massive endorsement" he had expected and requested. His 44.6% plurality of the vote on December 5 had fallen short of a majority, necessitating a runoff election two weeks later in which he won 55.2%. Political pressures were expected to grow as France prepared for parliamentary elections in 1967, and it was thought that the Gaullist government would review its policies to meet the challenge.

DOMESTIC AFFAIRS

The resurgence of political activity came late in the year. Earlier, 1965 had been generally calm at home and abroad. The Gaullist regime did not noticeably increase its international prestige, although it continued to insist upon the inviolability of national sovereignty and to block any advance toward supranational institutions in Europe. The proud and prosperous Fifth Republic slumbered contentedly under the paternal rule of its elderly president. "Perfection is not of this world," de Gaulle remarked on September 9, "but in relation to what existed yesterday, the French state appears at present to be entirely transformed in terms of solidity and capacity. No one in the world mistakes this." Until shortly before the election, most Frenchmen seemed to agree.

The Campaign. The 1965 presidential election was the first popular election for the presidency in modern French history. For reasons of health or of political strategy, President de Gaulle held off announcing his own candidacy until November 4, and then he did so in a television address in which he threatened that if he were not massively supported in office, the republic would return to chaos "even more disastrous than it experienced in the past." At 75 years of age, de Gaulle was not expected to serve the full seven-year term. After announcing his candidacy, however, he indicated to top officials that he intended to serve out the full term. The president made no mention of a successor, although he had often promised that he would designate one.

At this time few people doubted that de Gaulle would sweep to victory. What opposition existed was divided among multiple parties and multiple candidates, of whom the most important, from right to left, were: the extreme right-wing lawyer and deputy, Jean-Louis Tixier-Vignancour; the conservative Senator Pierre Marcilhacy; the middle-of-the-road Senator Jean Lecanuet; and the Socialist Senator François Mitterrand. All they apparently hoped for was to register a substantial minority vote of protest.

It soon appeared, however, that de Gaulle, in treating a presidential election as though it were a referendum, had committed the unforgivable error of underestimating and spurning the enemy. Passive discontent was stirred up by the rival candidates, whom de Gaulle collectively termed "champions of decadence," when they appeared on television. By late November, Senator Mitterrand, who had garnered support from all the left-of-center parties, was making headway, and de Gaulle's lead was further cut by the previously little-known Senator Lecanuet, who emerged as an attractive television personality in the campaign.

The Election. In the election of December 5, Mitterrand captured 31.7% of the votes. As the second place contender, he qualified to face de Gaulle in the runoff election scheduled for December 19. Lecanuet, who came in third with 15.6% of the votes, was eliminated along with the other candidates, but it was thought that more would be heard from him in the future. Mitterrand's campaign gained impetus, and on December 19 the senator acquired an impressive 44.8% of the vote, to de Gaulle's 55.2%.

For the first time in seven years the country had been offered a real political choice and had seen a serious political debate on the television screen. Although de Gaulle was the victor, the French knew that their future might well be with Mitterrand (age 49) or even Lecanuet (45), rather than with this extraordinary old man.

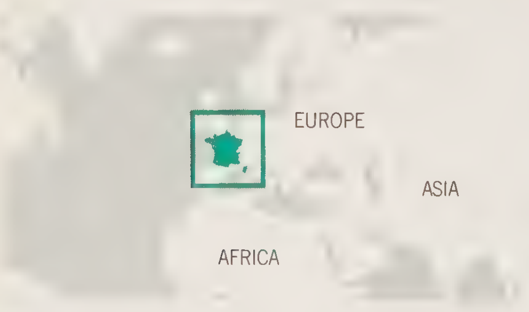
Politics and Local Elections. Early in the year attention was focused on the municipal elections held on March 14 and 21. In certain towns and cities, notably in the Paris region, Socialists and Communists formed temporary electoral alliances against the Gaullist UNR (Union for the New Republic) coalition, but such was their mutual suspicion that no overall accord emerged. Almost nowhere did the Gaullists dislodge opponents of the regime. In Paris they obtained the largest number of seats of any party, but not a majority. On the whole, the grass-roots elections in 37,779 municipalities gave moderate gains to the Communists, slight comfort to the Gaullists, and a measure of defeat to the quarrelling Socialists. Thus, the profound schism remained between local and national politics.

Gaston Defferre, Socialist mayor of Marseille, emerged triumphant from the March elections. Although he had scorned Communist help, he won easily over his Gaullist opponent. Defferre was then de Gaulle's principal challenger for the presidency, and his supporters set about to create a united front among left and center non-Communist opponents of the president. However, a rift had already formed within the Socialist party between those who backed Defferre's anti-Communist stand and those who favored a "popular front" alliance with the Communists.

On May 28 the Christian Democratic MRP (Popular Republican Movement) party congress overruled the objections of its elder statesman, former Premier Pierre Pflimlin, and provisionally agreed to support Defferre in December by means of a Democratic-Socialist federation. MRP conditions were that there must be no deal with the Communists and that the federation must not be an adjunct of the Socialist party, but must try to form a permanent party capable of obtaining a parliamentary majority.

The ball was then thrown to the Socialists. Former Premier Guy Mollet led the fight against federation with the MPR, accusing Defferre of seeking "adventures and chimeras." Defferre replied bluntly: "Since the liberation we have lost half our voters and three quarters of our active members. Let us not allow this chance to pass." On June 6

FRANCE · Information Highlights



Area: 211,207 square miles.
Population: 48,790,000 (March 1, 1965 est.).
Chief Cities (1962 census): Paris, the capital, 2,779,935; Marseille, 767,146; Lyon, 524,834; Nice, 278,714.
Government: *President*—Charles de Gaulle (took office Jan. 8, 1959); *Premier*—Georges Pompidou (appointed Nov. 28, 1962). *Parliament*—National Assembly, 482 members (party seating, 1966: Union for the New Republic and Union of Labor, 231; Socialists, 66; Democratic Center—Popular Republicans, Independents, and others, 55; Communists, 41; Democratic Rally—Radical Republicans, Radical Socialists, and others, 39; Independent republicans, 35; others, 15); Senate, 274 members (party seating, 1966: Independents, 58; Socialists, 51; Democratic Left, 50; Democratic Center, 38; Union for the New Republic, 24; Republican Center Group of Social and Rural Action, 18; Communists, 13; others, 22).
Religious Faiths: Roman Catholics, 83% of population; Protestants, 2%; others or unaffiliated, 15%.
Education: *Total school enrollment* (1962)—9,025,542 (primary, 5,901,664; secondary, 2,212,364; teacher-training, 31,388; technical, 511,273; higher, 368,853).
Finance (1963): *Revenues,* $17,000,000,000; *expenditures,* $18,400,000,000; *public debt,* $18,200,000,000; *monetary unit,* franc (4.93706 francs equal U.S.$1).
Gross National Product (1964): $87,400,000,000.
National Income (1964): $65,800,000,000; average annual income per person, $1,362.
Economic Indexes (1964): *Industrial production,* 138 (1958=100); *agricultural production,* 126 (1956–57=100); *cost of living,* 130 (1958=100).
Manufacturing (metric tons, 1964): Cement, 21,310,000; crude steel, 19,780,000; gasoline (1963), 7,881,000; wine, 6,157,000; sulfuric acid, 2,700,000; sugar, 2,437,000; meat (inspected), 2,072,400; fuel briquets and packaged fuel, 6,650,000; aluminum, 315,398; cotton yarn, 300,000; newsprint paper, 478,000; plastics and resins, 610,800.
Crops (metric tons, 1964): Sugar beets, 14,000,000 (ranks 3rd among world producers); wheat, 13,840,000 (rank, 4th); potatoes, 12,010,000 (rank, 5th); grapes, 9,466,000 (rank, 2nd); barley, 6,684,000 (rank, 4th); oats, 2,458,000 (rank, 5th); maize, 1,950,000 (rank, 13th); rye, 392,000 (rank, 9th); apples, 3,226,000; tomatoes, 576,000; pears, 424,000; rape seed, 238,000; onions, 221,000.
Minerals (metric tons, 1964): Iron ore, 60,934,000 (ranks 3rd among world producers); coal, 55,270,000 (rank, 10th); gypsum, 4,208,000 (rank, 5th); salt, 3,695,000 (rank, 7th); bauxite, 2,425,000 (rank, 5th); magnesium, 986 (rank, 8th); zinc, 16,920; natural gas, 194,363,000,000 cubic feet (rank, 9th).
Foreign Trade (1964): *Exports,* $8,995,000,000 (chief exports, 1963: automobiles, $495,000,000; clothing, $196,000,000; iron and steel plates and sheets, uncoated, $177,000,000; wheat and meslin, unmilled, $158,000,000; wine, $152,000,000); *imports,* $10,070,000,000 (chief imports, 1963: crude petroleum, $821,000,000; coal, $304,000,000; wool, greasy, $205,000,000). *Chief trading partners* (1963): West Germany (took 17% of exports, supplied 18% of imports; Belgium-Luxembourg (took 9% of exports, supplied 8% of imports); U.S. (took 5% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 888,559 miles (310,685 paved); *motor vehicles* (1964), 9,735,000 (automobiles, 7,800,000); *railways* (1963), 23,954 miles; *merchant vessels* (1964), 572 (4,804,000 gross registered tons); *national airline,* Air France; *principal airport,* Paris.
Communications: *Telephones* (1964), 5,336,374; *television stations* (1964), 44; *television sets* (1964), 5,000,000; *radios* (1963), 14,551,000; *newspapers* (1961), 136 (daily circulation, 11,800,000).

the Socialists approved negotiations with the MRP, but imposed conditions of their own, one of which was that the federation charter should propose a government take-over of private (mostly church) schools and express the hope of eventually "reintegrating" the Communist party into political life. The two sets of conditions prevented MRP and Socialist agreement, and the federation proposal collapsed on June 18. A week later Defferre withdrew his candidacy.

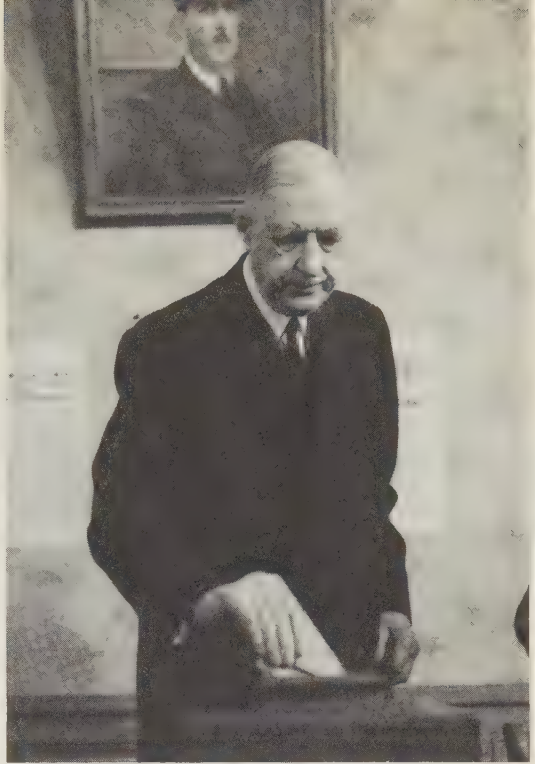
The Gaullists were delighted; the Communists hardly less pleased, since they could now resume their wooing of the Socialists. Once more the parties were authors of their own misfortunes, and the president was given an issue with which to deride them before the public.

The September triennial elections for 91 of the Senate's seats held few surprises. The MRP and the Democratic Left made slight gains; the UNR and the Independents and the Socialists suffered slight losses. Gaston Monnerville, leader of the Radical Socialists, not only was returned to the Senate but was reelected as its president. An outspoken opponent of "elective monarchy" and of de Gaulle's 1962 violation of the constitution, Monnerville remained a symbol of the divorce between local politics and the plebiscitary regime ruling France.

De Gaulle and the Opposition. President de Gaulle made provincial tours in the spring and early summer, drawing strength from the grass roots. Scorning umbrellas, he stood in the pouring rain of one of Europe's worst summers, speaking familiar words about the greatness, prosperity, and stability of France, and its need to be independent of the United States and the Soviet Union: "Allez la France!" he shouted at Chartres on June 19, "Allez la France! Allez!" This was what he called (September 9) "direct contact" with the nation, so that it "can know the man who is at its head, discern the ties which unite it to him, be acquainted with his ideas, his acts, his plans, his concerns, his hopes." The popularly elected president, he said, would henceforth be "the keystone that covers and solders the edifice of our institutions."

Opposition manifested itself in many ways. An old enemy, Gen. Maxime Weygand, died on January 28 at the age of 98. As Marshal Foch's chief of staff, he had read the 1918 armistice terms to the Germans. Later he had commanded the French army in the catastrophe of 1940 and then served as a member of Marshal Pétain's government immediately thereafter. Weygand had lived on as a symbol of the old army's hostility to the "leader of the Free French." De Gaulle's refusal to permit the funeral service to be held at the Invalides was a logical but bitter reprisal against a former superior who had ended by supporting the Secret Army Organization (OAS) against the president. The ceremony itself, presided over by Cardinal Feltin, archbishop of Paris, was an impressive demonstration, and a reminder of the schisms on which the Fourth and Fifth Republics had been erected.

De Gaulle's act was in startling contrast with his mass measures of amnesty for those who had plotted against him during the Algerian war. By mid-summer all but 353 of the 3,226 persons sent to prison had been released. Yet, as late as May, extremists tried to assassinate the president during his tour in the Vendée. The abortive murder plot was directed from abroad by the OAS, which has sworn to kill de Gaulle for his "treason" in granting independence to Algeria.



UPI

MUNICIPAL ELECTIONS were held on March 4. President de Gaulle votes at the Colombey-les-Deux Eglises town hall.

Economy. The French economy slowed again in early 1965, with the growth rate at approximately 2.5%. The government's stabilization plan had not removed the threat of inflation, but it seemed to bring about what Premier Georges Pompidou called "a stagnation of production." This was especially true in the automobile, textile, shoe, and machine tool industries. Unemployment, though low, was rising, and many workers were not employed full time. Industrial unions complained about labor's failure to share in the general prosperity, and farmers were worried by the stalemate on Common Market agricultural prices. On September 1 the government raised the minimum industrial wage 2%, to the equivalent of 41 cents an hour, and the minimum wage 2.37%, to the equivalent of 33 cents an hour.

In answer to complaints from big business, the government assured liberalized credits to encourage investment and exports. It promised to raise some $200 million by means of a 15-year-bond issue and to invest that amount in selected industries. Incentives to encourage savings and channel them into industry, said the president, would be "one of the state's vital tasks for the next few years." The economy picked up toward the end of the year, but the 5% target growth rate of the Fifth Economic and Stabilization Plan (1966–70) was unlikely to be realized in the first few years.

In February, President de Gaulle, influenced by the conservative economist Jacques Rueff, called for a return to a modified gold standard. At the same time, France greatly increased its normal purchases of gold, exchanging more than $500 million for gold in the early months of 1965 in what seemed part of an effort to reduce the role of the British pound and the U.S. dollar in international trade. As an "olive branch," however, France offered the United States early payment of $178,500,000 of its postwar debt. (See INTERNATIONAL FINANCE.)

Defense. The Gaullist defense policy remained an expression of the president's determination to keep France "free of vassalage." De Gaulle said in a television address on April 27 that "the supreme interest of mankind dictates that each nation be responsible for itself, free from encroachments, aided in its progress without conditions of allegiance . . . . Thus we are reaching the point at which no state in the world could bring us death without receiving it on its own land, which is without doubt the best possible guarantee."

Early in July the government announced the production of a new, smaller nuclear bomb, which could be readily carried in the Mirage IV bomber. On November 26, France launched its first earth satellite from a test center at Hammaguir in Algeria's Sahara, becoming the third nation to do so independently. Construction of a nuclear testing site on the Tuamotu Islands (near Tahiti) continued in preparation for the transfer of French activity from the Sahara in mid-1967. Research continued on ballistic missiles and on plans for a satellite launching site in French Guiana. France offered to make the Guiana space range available to other nations, and in December the United States government expressed interest in jointly developing the center for international use. (See ATOMIC ENERGY; MISSILES; SPACE EXPLORATION.)

A striking break with the 60-year old tradition of universal military service came on April 7, when the government approved a bill exempting at least half the eligible annual contingent. Manpower needs had greatly shrunk with the disappearance of many overseas posts and the conversion of the army to a modern weapons system. Opponents of the bill argued the civic virtues of universal service and proposed reduction of the period of service from 18 to 12 months, but the government said that 12 months was too short a period for proper training. The National Assembly finally modified the period to 16 months and passed the bill on May 27.

FOREIGN AFFAIRS

While asserting French independence, the Gaullist regime appeared determined to cut its military, political, and—to some extent—economic ties with the United States, western European nations, and the international alliances to which France is a party. De Gaulle's obstruction of NATO and his lack of cooperation in the Common Market brought charges that he was anti-American and anti-European. In general, French links with traditional allies were strained, while de Gaulle made overtures to traditional enemies in the Communist bloc.

NATO. The independence of French defense policy was such that NATO's Secretary General Manlio Brosio said on January 4: "France, under de Gaulle, can no longer be considered a full working member, but rather an associate member of the alliance." The year bore out the judgment. Repeatedly, French spokesmen declared that the "unwieldly and costly" alliance must be completely reformed before 1969. On May 30 it was announced that France would not participate in the biennial Fallex-1966 exercises, but would simply observe them. The gap between the French strategy of instant nuclear retaliation and the American plan of graduated retaliation to various forms of possible Soviet attack made discussion futile at the NATO defense ministers conference in Paris in June. France also boycotted NATO's routine joint military exercises in the fall. The French actions constituted the strongest assault to date on the concept of integrated European defense.

"The vital fact of these last seven years," de Gaulle told the nation on April 27, "is that we have resisted the sirens of surrender and have chosen independence. . . . In short, France now has a policy, and it is being made in Paris." At his September 9 press conference, he served notice that "in 1969, by the latest, the subordination known as 'integration' which is provided for by NATO and which hands our fate over to foreign authority shall cease, as far as we are concerned." In an effort to reduce the "excessive role" of the United States in European defense, the government on October 16 suggested two alternative alliances to NATO: one a loose treaty of alliance of the present members, and the other a European alliance (without the United States) with some integration of non-nuclear facilities. France strongly objected to U.S. plans for a multilateral nuclear force under NATO. (See also the article on NORTH ATLANTIC TREATY ORGANIZATION.)

Common Market. France's attitude toward European unity was negative to the extent of refusing to participate in Common Market negotiations on mat-

PRESIDENTIAL CANDIDATES Mitterrand (*left*) and Lecanuet (*right*) proved to be strong contenders. (*Center*) Poster boy urges all to vote on December 5.

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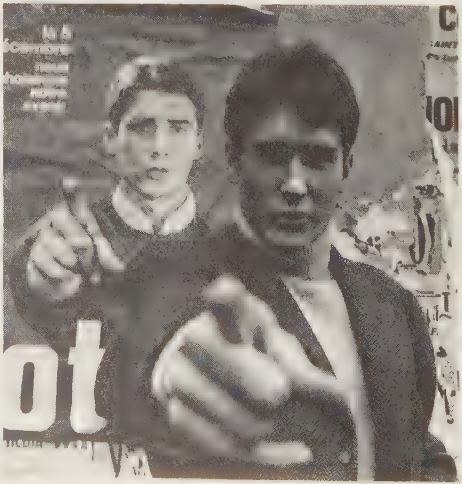

PICTORIAL PARADE

WIDE WORLD

ters that might lead to political as well as economic integration in western Europe. In talks with German Chancellor Erhard at Rambouillet on January 19 and 20, de Gaulle agreed to study the question of political cooperation, but the French attitude later proved to be uncooperative. Italy's proposal that the foreign ministers of the six Common Market members meet in Venice in May or June was rejected by France on the ground that there was insufficient agreement about the nature of European unity to avoid conference failure. Disagreement centered on de Gaulle's refusal to contemplate any measure of supranationalism, his opposition to British participation, and his insistence that the other five members turn away from dependence on United States protection and accept French leadership in building an independent European nuclear force. On March 31 he stated that talks on European cooperation could proceed only after agreement on a common agricultural policy.

Through the spring and early summer the struggle continued in Brussels. Wisely or not, the other five members tried to tie an EEC agricultural accord to the creation of an independent Common Market budget and a strengthened European Parliament. This "plot," as the French called it, led by the Dutch and Italians and supported by the Germans, resulted in a crisis beginning in June. "We do not want a supranational Europe," de Gaulle said to the parliamentarians at the annual Élysée garden party on June 10. "For us, that would be to want to disappear." He and Premier Pompidou noted that the parties calling for European integration were those most determined to maintain the Atlantic alliance, and that this alone demonstrated the falseness of their pose as champions of Europe.

French wrath descended on the EEC Executive Commission and the "Eurocrat" civil servants. On July 1 a government spokesman declared that the Brussels discussions were "at a standstill" and indicated that France henceforth would boycott EEC meetings. Within the next few days, France threatened to raise tariffs against the other five members, announced new subsidies to her farmers, invited her permanent representative at EEC headquarters to return home, and promised to boycott European Coal and Steel Community meetings and a meeting of the EEC finance ministers. Walter Hallstein, president of the Executive Commission, said on July 8 that if France carried out her threats, she would commit "the greatest destructive act in the history of Europe and even the free world since the days of Hitler."

Supported by his former opponent, Belgium's Foreign Minister Paul-Henri Spaak, de Gaulle insisted that the farm accord underhandedly had been tied to the movement for common institutions. On September 9 he said that the crisis had been "inevitable" and that the whole series of European agreements concluded before 1958 had been dominated by the interests of the five other EEC members, made possible by French abdication, and presided over by "a technocracy for the most part foreign."

The stalemate continued. The five other EEC members, while continuing the discussion on agricultural financing measures, appealed for an end to the French boycott. On October 26 they accepted Spaak's proposal and invited France to attend a Council of Ministers meeting away from Brussels, from which Hallstein's Executive Commission would be excluded. On December 22, France expressed willingness to meet with the five members in Luxembourg in late January 1966 to discuss the basic rift.

PICTORIAL PARADE

FRENCH FOREIGN MINISTER COUVE DE MURVILLE (right), arriving in Moscow on October 28, receives a cordial welcome from Soviet Foreign Minister Andrei Gromyko.

Relations with Western Europe. France's relations with West Germany in 1965 varied from lukewarm to chilly. In cordial talks at Rambouillet in January, Erhard and de Gaulle agreed to discuss German unity with Britain and the United States, but not Germany's participation in some type of Atlantic nuclear force. Much of the cordiality resulted from the president's promise to consider the subject of European unity, and therefore faded with the failure of the EEC negotiations in Brussels. Germans applauded de Gaulle's view that "the German problem is, indeed, *the* European problem," but not his comment, on February 4, that Germany's problem of satisfying her eastern neighbors' territorial claims "cannot be resolved except by Europe herself"—which implied exclusion of the United States. Although the French government denied that such was the intent, de Gaulle's unilateral pursuit of closer relations with the Soviet Union and his refusal to identify himself with the West's approach to Moscow on the German problem deepened the suspicion that France hoped to exclude the United States from dealing with the Soviet Union on this matter.

The president's visit to Bonn on June 11 and 12 brought no lessening of strain, despite various promises of accord and cooperation in the economic, military, and technical fields. On September 9 he alluded to the January 1963 treaty of cooperation as being still "in a stage of cordial potentiality in many domains." His public reference on February 4 to "the reasonable and skillful policy adopted by Chancellor Adenauer's government," contrasted with his failure to mention Erhard at all. Relations were not enhanced by the published report of an interview de Gaulle gave to a foreign diplomat in the fall in which he was quoted as saying that "Germany must never again exert an influence on European decisions nor have a voice in Europe's military strategy," and that "it was a pity the postwar four-power control of Germany had ever been abandoned." The French foreign ministry

PICTORIAL PARADE

DE GAULLE AND ERHARD, West Germany's chancellor, held two days of intensive policy talks at the Rambouillet Chateau, outside Paris, on January 19 and 20. Here, de Gaulle greets Erhard, who is escorted by France's Premier Pompidou (right).

vigorously denied the report, and de Gaulle repeatedly stated that Germany should play a great part in the new Europe.

Relations with Italy, too, were distant. When the Dutch and the Italians sprang their "plot" at the Brussels EEC negotiations, de Gaulle remarked: "Do they think we can be bought like Yemen or Italy?" A happier moment occurred in July when the 7¼-mile automobile tunnel beneath Mont Blanc, linking France and Italy, was opened in a joint ceremony by de Gaulle and Italy's President Saragat.

A visit to Paris on April 2 and 3 by Prime Minister Harold Wilson indicated that Franco-British relations were slightly warmer than before. Earlier, de Gaulle had gone to London "to pay homage to the great Churchill," who died on January 24. On that occasion he remarked on "how satisfied I was with the contact" with Wilson. In turn, Wilson called his talks with de Gaulle in April "frank, robust and constructive." He assured de Gaulle that Britain would defend the pound. Differences were manifest on policy in Southeast Asia, where de Gaulle opposed both the United States role in Vietnam and the British commitment to defend Malaysia against an Indonesian attack. Agreement was reached on high-level talks toward joint production of military aircraft. On November 24, de Gaulle hinted that he might abandon his opposition to British membership in the Common Market. (See also EUROPE.)

Overtures to Eastern Europe. France strengthened its links with eastern European countries in 1965. In mid-January, France welcomed President Edward Ochab of Poland and concluded cultural and economic agreements with Rumania. At the same time, Hungary indicated interest in France's policy of "an independent Europe, a European Europe, and an enlarged Europe."

Greeting Valerian A. Zorin, the new Soviet ambassador, on April 10, de Gaulle said: "Over and above all, and even above ideologies, there are two necessities in the world today, namely, peace and progress. I am sure that Russia and France today agree fundamentally on these two objectives and agree also, so far as they can, on attaining them together." A statement issued on April 29, following a cordial visit to Paris by Russia's' Foreign Minister Gromyko, said that both countries deplored the worsening situation in Vietnam, desired an end to intervention there, and urged a return to the Geneva agreements of 1954 and 1962 that had guaranteed the independence of Vietnam, Cambodia, and Laos.

In late October, Foreign Minister Couve de Murville traveled to Moscow for talks with the Soviet leaders. Various technical agreements concerning television and atomic energy were concluded with Moscow. But the major purpose of these renewed ties with eastern Europe was to return France to the traditional independent foreign policy of the Third Republic.

Franco-American Relations. Despite routine invocations of historic friendship, the Franco-American chill showed few signs of warming. The U.S. government was displeased by the French run on American gold early in the year. In July the French rejected the American proposal for an international monetary conference as being likely to accentuate existing differences or result in merely sham reforms. An American picture-taking reconnaissance flight over the Pierrelatte nuclear plant in the Rhône valley in late July aroused French ire. The French foreign minister protested, but the incident was closed after the U.S. State Department expressed "regret."

The American and French presidents sniped at each other in public statements. De Gaulle let it be known on May 22 that he disapproved of U.S. intervention in the Dominican Republic rebellion and wanted the troops withdrawn. U.S. Secretary of State Dean Rusk thereupon attacked him for his alleged irresponsibility. Apparently French foreign policy held that resistance to the United States would increase the stature of France.

Africa and Asia. Relations with North Africa, President de Gaulle remarked on February 4, were "evolving favorably, very favorably." The 1962 Sahara oil agreement was renegotiated with the new Algerian government of Houari Boumedienne. The new accord, signed on July 29, gave Algeria an estimated royalty of 75% of the profits. France also promised Algeria some $400 million in aid over the next five years. French relations with the United Arab Republic also were considerably more friendly.

In Asian affairs, de Gaulle stood ready as before to help bring about a settlement of the war in Vietnam, and he proposed an international conference to that end. Full of praise for neutral Cambodia, he was hostile to American escalation of the Vietnamese fighting. Trade agreements with Communist North Vietnam were extended for one year on March 16. The South Vietnamese government broke off diplomatic relations with France on June 24.

Diplomatic contacts with Peking remained cordial. Trade with China rose considerably in 1964, but was still a small portion of French overseas commerce in 1965. André Malraux, the French minister of state, had talks in Peking in July with Mao Tse-tung and other Chinese leaders, but beyond confirming de Gaulle's position that the Far Eastern question could be solved only by direct great-power negotiations, including China, the results of the visit were not evident. De Gaulle took no side in the Indian-Pakistani war that broke out in the summer of 1965, merely saying that the conflict was "deplorable."

As in the case of NATO, de Gaulle undertook to dissociate France from SEATO (Southeast Asia Treaty Organization). France withdrew its units from SEATO'S spring naval maneuvers in the China Sea, virtually boycotted SEATO's Ministerial Council meeting in April, and withdrew its delegation to the SEATO military staff in May.

French Community. The only disturbance within the tranquil French Community in 1965 occurred in St. Pierre and Miquelon, an island territory off the southern coast of Newfoundland, where labor troubles brought unrest between the population and the governor. Paris dispatched a detachment of special police to support the governor against the municipal council, which was then dissolved on June 2.

United Nations. The French role at the United Nations was shadowy at best. De Gaulle charged that "the so-called 'United' Nations" had deviated from its charter and had "arrogated" to itself the right to make "armed interventions" in Korea and the Congo (Léopoldville). However, he also referred to Secretary-General U Thant's "wisdom" and proposed that Washington, Moscow, London, Peking, and Paris renegotiate the UN Charter at a Geneva conference. In July he withdrew the French representative from the UN Korean command. France again argued for admission of Peking to United Nations membership. The government continued to boycott the UN Disarmament Committee and refused to pay its assessment for past peacekeeping costs.

(See also De Gaulle, Charles.)

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FREEMAN, Orville L. See biographical sketch under United States.

FREI MONTALVA, Eduardo. See biographical sketch under Chile.

FRENCH LITERATURE

France lost two first-rate writers in 1965. Roger Vailland (b. 1907) was best known for his novels *Drôle de jeu* and *La loi.* Jacques Audiberti (b. 1899) was the author of the excellent play *Le mal court,* and of several volumes of poetry and fiction. (See Necrology.)

In general, nonfiction dominated the 1964–65 French literary season, prevailing over fiction both in number of works published and in popularity.

Nonfiction. The best sellers were for the most part biographies, books on current events and problems, satirical writings, and ironic essays.

FRENCH EMBASSY PRESS AND INFORMATION DIVISION

RAYMOND QUENEAU published one of the most important French novels of 1965, the irreverent *Les fleurs bleues.*

Among the literary biographies were André Maurois' monumental *Prométhée, ou La vie de Balzac,* Henri Troyat's *Tolstoï,* and Françoise Mallet-Joris' *Marie Mancini.* Simone de Beauvoir, in *Une mort bien douce,* describes the death—and the life—of her mother; and Maurice Goudeket, in *La douceur de vivre,* writes about his wife, the novelist Colette. Françoise Gilot's *Vivre avec Picasso* was an international best seller.

Current events were represented by numerous books on Charles de Gaulle, of which François Mauriac's *De Gaulle* was the most widely read. Other works of the same title were penned by Raymond Aron and Jean Lacouture, and Jacques Laurent produced the highly irreverent *Mauriac sous de Gaulle.* The Vietnam war was the source of a series of literary works, the principal one being Lucien Bodard's *L'humiliation.*

Can the word "satire" be used in connection with Roger Peyrefitte's latest offspring, *Les Juifs?* Some readers refused to see in it any satirical intent and consider it as a kind of academic practical joke. Others, such as Jean Cau, denounced it—perhaps unjustly—as an anti-Semitic diatribe. In any case, the book had record sales. The same was true of *En France: la fin de l'opposition,* by Jean François Revel. This caustic commentary indirectly attacks the Fifth Republic but mostly criticizes the apolitical attitude and lack of idealism of most Frenchmen.

Fiction. Few important new authors were intro-

LOUIS ARAGON won critical acclaim during the year for his complex autobiographical novel called *La mise à mort.*

FRENCH EMBASSY PRESS AND INFORMATION DIVISION

duced to the reading public by the 1965 literary awards. Georges Conchon won the Prix Goncourt for *L'état sauvage,* an amusing satire of racist attitudes in the new African countries. Although the novel was not enthusiastically received by the critics, it had immediate commercial success. Other literary prize winners (Jean Blanzat, Monique Wittig, and Jean-Pierre Faye) were successful only by the prestige they obtained.

The two most important novels of the year were by Raymond Queneau and Louis Aragon. Queneau's *Les fleurs bleues* is a great parade of caricatures, both learned and clownish. The novel is as irreverent and whimsical as his earlier success, *Zazie dans le Métro* (1959). The new work abounds in plays on words and amusing verbal inventions, but also offers the reader a reflection on today's world and a disillusioned, stoical philosophy that is similar to Montaigne's. Aragon's *La mise à mort* is a rich, complex book. Its verbal virtuosity is prodigious, and it proclaims the dazzling poetic gifts of the author. The book is a novel, an autobiography, a mirror, and a song of love and death.

Other works of fiction suffer by comparison with *Les fleurs bleues* and *La mise à mort.* Violette Leduc's *La bâtarde* is a powerful though thoroughly unpleasant feminine confession; Marcel Arland's *Le grand pardon* sums up the experience of a man and a writer; in *Le Palais d'Hiver,* Roger Grenier portrays a 20th century Emma Bovary in a Béarnais setting; and *Les sultans,* by Christine de Rivoyre, is a witty description of today's "independent" woman and her true subservience to men.

Jean-Marie Le Clezio, an author who had shown much promise in 1963 with his *Procès verbal,* reaffirmed his lyrical qualities in 1965 in a collection of short stories entitled *Fièvre.* Paul Morand published two collections of stories under the titles *Tais-toi* and *Nouvelles du coeur.* Because of their imaginative and artistic values, they are reminiscent of tales by both Prosper Mérimée and André Pierre de Mandiargues.

Poetry. It is difficult to choose among the numerous works of poetry published each year those that have a chance for survival. The poems in Georges Emmanuel Clancier's *Terres de mémoire* are intimate, personal elegies. His poetry sings of happiness, of the flight of time. Another poet who draws upon memories of his past is Claude Sernet. He suggests intimate secrets and deep wounds in *L'étape suivante.* In a very different vein, Olive Tamari's *Le grand voyage de la mer* expresses the pleasure of form and matter in a wave of surrealistic imagery.

Noteworthy also is the posthumous edition of *Derrière son double* and *La fin et la manière* by Jean-Pierre Duprey, a young poet who committed suicide in 1959. His work is in the tradition of Jarry, Lautréamont, and Artaud. He was a visionary: what he has left is short, intense, fragmentary, and much admired by many young poets.

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FRIENDS, Religious Society of

The Five-Years Meeting of Friends (Quakers), the largest body of Friends in the United States, changed its name to Friends United Meeting in January 1966. This body, first organized in 1902, has a membership of more than 70,000 Quakers. It encompasses 14 yearly meetings (separate Quaker districts), ten in the United States and four in other countries. The headquarters for Friends United Meeting are in Richmond, Ind.

Friends of both Philadelphia Yearly Meeting and New York Yearly Meeting, assisted by Quakers from other parts of the nation, cooperated in a project to rebuild Negro churches which had been burned in Mississippi. During 1965 this active group of Friends built a community center near Canton, Miss., for Negroes in that area.

The American Friends Service Committee (AFSC) sent a small mission to South Vietnam to try to find ways that Quakers might aid the Vietnamese. The AFSC also carried on an exchange of teachers between the United States and the Soviet Union as part of the school affiliation program; initiated family planning projects in Hong Kong, Baroda (India), and elsewhere; started a new housing project in Mexico; and worked actively for school desegregation in the United States.

Conferences held during 1965 included the fifth Race Relations Conference at Earlham College, Richmond, Ind., at which meeting John Youngblut of Atlanta, Ga., was named the new chairman. In addition, the United Society of Friends Women and the Quaker Men met simultaneously at Whittier, Calif.; the Association of Evangelical Friends held its seventh triennial session at Haviland, Kans.; and the Young Friends of North America convened at Syracuse, Ind.

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Curator, Quaker Collection, Haverford College

FRUITS

American orchards and vineyards produced more abundantly in 1965 than in 1964. Production of the 20 major fruits totaled 19,644,000 tons, compared with 18,862,000 tons in 1964. Record crops of grapes and cranberries were responsible for the increase, offsetting significant declines in pears and cherries. The production of apples, grapes, sour cherries, plums, prunes, and nectarines was substantially above average.

Noncitrus fruit production in 1965 was 3% greater than in 1964, and 14% above the 1959–63 annual average, according to the Statistical Reporting Service of the U.S. Department of Agriculture. Citrus production for the 1965–66 crop year indicated an increase of 7%.

Grapes. The production of grapes in 1965 reached an all-time high of 4,313,060 tons, or 24% more than in 1964, and 33% above the 1959–63 annual average. In 1965, about 4,000,000 tons consisted of European-type grapes grown principally in California and Arizona. California's crop in 1965 included 750,000 tons of wine varieties and 2,560,000 tons of raisin varieties. Production of raisins amounted to 272,000 tons (dried basis), or 39,625 tons more than in 1964.

Cherries. U.S. sour cherry production in 1965 totaled 177,540 tons—the second largest crop on record. The crop was 35% less than the 1964 record, but 31% above the 1959–63 annual average. Sweet cherry production decreased to 85,210 tons, or 29% less than the large crop of 1964, and 2% below the 1959–63 average.

Apples. The 1965 crop of 135,720,000 bushels ran 3% below the 1964 crop, but 11% higher than the 1959–63 average. The crop (in bushels) included: 3,492,000 of summer varieties, 14,293,000 of fall types, and 117,935,000 of winter apples.

Peaches. The production of 74,097,000 bushels of peaches in 1965 was slightly below 1964 production, and 2% below the 1959–63 average.

Table 1—U.S. PRODUCTION OF APPLES, PEACHES, AND PEARS, BY LEADING STATES
(In bushels)

	Average 1959–63	1964	Preliminary 1965
Apples[1]			
Washington	22,280,000	25,500,000	24,000,000
New York	20,860,000	21,500,000	23,500,000
Michigan	13,160,000	16,500,000	16,000,000
Pennsylvania	8,940,000	11,500,000	11,000,000
Virginia	10,090,000	9,800,000	10,500,000
California	9,786,000	12,400,000	9,000,000
West Virginia	5,260,000	5,700,000	5,100,000
North Carolina	2,360,000	2,400,000	4,200,000
Ohio	3,260,000	4,200,000	3,600,000
Massachusetts	2,820,000	2,800,000	3,150,000
New Jersey	2,760,000	2,800,000	2,600,000
Illinois	2,240,000	2,500,000	2,500,000
Peaches			
California			
Clingstone	27,969,000	36,253,000	30,419,000
Freestone	12,876,000	13,668,000	11,876,000
South Carolina	6,740,000	1,100,000	7,500,000
Georgia	4,940,000	1,800,000	4,800,000
Michigan	2,770,000	2,900,000	3,000,000
Pennsylvania	2,530,000	2,800,000	2,800,000
New Jersey	2,220,000	2,500,000	2,400,000
North Carolina	1,360,000	250,000	1,500,000
Colorado	1,328,000	1,200,000	1,150,000
Alabama	1,130,000	300,000	1,050,000
Arkansas	1,554,000	1,100,000	1,050,000
Virginia	1,350,000	1,000,000	1,000,000
Pears			
California	13,984,000	16,460,000	8,501,000
Oregon	4,778,000	4,950,000	6,200,000
Washington	4,366,000	5,080,000	2,960,000
Michigan	1,400,000	1,900,000	1,100,000
New York	655,000	780,000	670,000
Colorado	176,000	200,000	240,000
Pennsylvania	114,000	140,000	115,000
Texas	120,000	85,000	110,000
Idaho	61,000	90,000	95,000
Utah	199,000	250,000	70,000
Connecticut	54,000	64,000	56,000

[1] Estimates of commercial crop in commercial apple areas of each state. (Source: Statistical Reporting Service, U.S. Department of Agriculture.)

Pears. The nation's 1965 pear crop totaled 20,117,000 bushels, or 33% below the 1964 crop and 23% less than the 1959–63 average. Nearly all the production came from California, Washington, and Oregon, which together supplied 17,661,000 bushels.

Table 2—U.S. PRODUCTION OF FROZEN FRUITS

Product	1963 (Pounds)	1964 (Pounds)
Apples and applesauce	75,429,000	86,893,000
Apricots	13,881,000	16,002,000
Blackberries	20,675,000	23,851,000
Blueberries	25,767,000	30,574,000
Boysenberries	9,521,000	8,839,000
Cherries	82,686,000	204,126,000
Grapes and pulp	15,648,000	22,722,000
Peaches	65,607,000	76,250,000
Plums	7,113,000	8,448,000
Prunes	512,000	1,635,000
Raspberries, black	7,332,000	5,954,000
Raspberries, red	31,441,000	25,335,000
Strawberries	234,440,000	252,646,000
Loganberries, olallieberries, gooseberries, currants	5,888,000	3,209,000
Other fruit	23,573,000	28,671,000
Total	619,513,000	795,155,000
	1963–64 (Gallons)	1964–65 (Gallons)
Citrus juice pack[1]		
Orange, concentrated	53,674,000	88,869,000
Grapefruit, concentrated	2,573,000	4,000,000
Blend, concentrated	130,000	70,000
Tangerine, concentrated[2]	1,145,000	1,154,000
Limeade	1,196,000	. . .

[1] Season beginning November 1. [2] Florida pack only. (Sources: *fruits*—National Association of Frozen Food Packers; *citrus juices*—Florida Canners Association.)

Plums and Prunes. California and Michigan produced 123,500 tons of plums, or 3% less than the 1964 record production, but 26% above the 1959–63 average. The 1965 prune crop totaled 61,200 tons, down 15% from 1964 and 1% below the 5-year average production.

Apricots. California, Washington, and Utah grew 221,200 tons of apricots—slightly less than in 1964, but 7% above the 1959–63 average.

Dates. California's date output of 19,300 tons slipped 20% below the 1964 crop, and 16% below the 1959–63 average.

Olives. An estimated 52,000-ton olive crop in California was 4% below the 1964 crop but 6% above the 1959–63 average.

Figs. The 1965 fig crop of 53,900 tons (fresh basis) was 20% below 1964 production, and 16% below the 5-year average.

Avocados. Florida grew 2,900 tons of avocados—only one fifth as much as the 1964 crop because of damage by hurricane Betsy in August-September 1965. California's fall and winter crop was forecast at 32,000 tons, or 2½ times the 1964–65 crop.

Cranberries. The 1965 cranberry crop rose 6% above that of 1964—to 1,422,000 barrels—or 11% above the 1959–63 average. Massachusetts, with 745,000 barrels, grew more than half the crop.

Strawberries. The production of 460,977,000 pounds of strawberries was 16% less than the 1964 crop, and 8% below the 1959–63 average.

Table 3—U.S. CITRUS PRODUCTION, BY LEADING STATES
(Number of boxes[1])

	Average 1959–63	1964	Preliminary 1965[2]
Oranges			
Florida	84,880,000	86,200,000	91,300,000
California	27,460,000	31,600,000	34,000,000
Arizona	1,572,000	2,420,000	2,700,000
Texas	1,756,000	880,000	1,100,000
Louisiana	164,000	8,000	. . .[3]
Total U.S	115,832,000	121,108,000	129,100,000
Grapefruit			
Florida	30,680,000	31,900,000	34,000,000
California	2,996,000	4,230,000	4,000,000
Arizona	2,626,000	2,900,000	3,200,000
Texas	3,054,000	2,000,000	3,000,000
Total U.S	39,356,000	41,030,000	44,200,000
Lemons			
California	15,180,000	13,500,000	14,000,000
Arizona	1,088,000	1,110,000	1,700,000
Total U.S	16,268,000	14,610,000	15,700,000
Tangerines			
Florida	3,460,000	3,900,000	3,500,000

[1] Approximate weight per box varies as follows: oranges, 90 pounds in Florida and Texas, 75 pounds in California and Arizona; grapefruit, 80 pounds in Florida and Texas, 64 pounds in Arizona and California desert valleys, 67 pounds elsewhere in California; lemons, 76 pounds; tangerines, 90 pounds. [2] Season begins with the bloom of the year shown and ends with completion of harvest the following year. [3] Production too small to warrant estimate. (Source: Statistical Reporting Service, U.S. Department of Agriculture.)

Citrus Crop. Citrus production rose an estimated 7% above 1964–65. Larger crops of oranges, grapefruit, lemons, and tangelos were expected. The U.S. Department of Agriculture estimated the crop at 129,100,000 boxes, barring weather damage. Grapefruit production in 1965–66 was estimated at 44,200,000 boxes, based on early prospects.

Foreign Trade. The value of exports of American fruit and fruit products increased from $274,000,000 in fiscal year 1964 to $289,000,000 in the fiscal year 1965, according to the Economic Research Service.

The value of fruit and fruit preparation imports increased in fiscal year 1965—to $283,794,000, compared with $214,420,000 in the preceding year. Bananas, the largest fruit import, accounted for $159,133,000 of the 1965 total.

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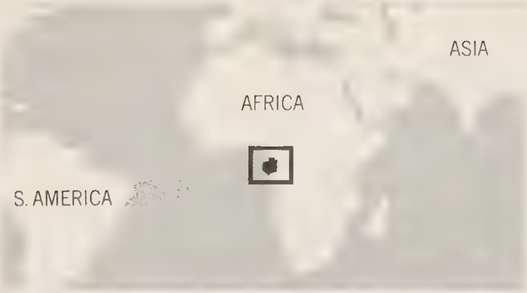
FUELS. See ATOMIC ENERGY; COAL; GAS; MINING; PETROLEUM; and, for rocket and spacecraft fuels, MISSILES; SPACE EXPLORATION.

GABON



The major event in Gabon in 1965 was the death of Dr. Albert Schweitzer on September 4 at his jungle hospital near Lambaréné. The passing of the 90-year-old Nobel Prize winner resulted in speculation that his world-famous hospital would be brought under stricter control by the Gabon government or that it would be closed because of a modern public hospital at Lambaréné. On September 15, however, Gabon's ambassador to the United Nations, Bonjean Ondo, announced in New York that Gabon would oppose any "radical transformation" of the jungle hospital, which, he said, would retain "a certain originality" in memory of its founder. (See SCHWEITZER, ALBERT.)

Foreign Policy. The mainstay of Gabon's foreign policy continued to be its loyalty to France. On August 4, President Léon M'Ba declared: "Between Gabon and the France of General de Gaulle there will never be any differences." On August 25 the two countries signed a new accord providing for French aid to Gabon's army. French military protection, if required, would be flown in directly from France.

Gabon was an active supporter of the Organisation Commune Africaine et Malgache (OCAM), a political organization of French-speaking African states established in February. Gabon's relations with the Congo (Brazzaville) were strained during 1965, as both nations traded accusations of border violations.

Economy. Continued exploitation of Gabon's mineral resources by French companies in 1965 resulted in increased outputs of petroleum, uranium, manganese, and gold. For the first time, the value of Gabon's mineral exports equaled that of its forest-product exports.

France promised assistance for the construction of a railroad linking the Mekambo iron ore deposits with the coast, of electric power stations, and of a transistor radio plant. France also promised to help create a new deep-water port at Owendo, and the European Economic Community allocated $263,000 for a study of the project.

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GABON · Information Highlights

Area: 103,089 square miles.
Population: 462,000 (July 1, 1965, est.).
Chief City (1961 est.): Libreville, the capital, 31,027.
Government: *President—Premier*—Léon M'Ba (took office Dec. 24, 1957). *Parliament*—National Assembly, 47 members; party seating (1965): Gabonese Democratic Bloc, 44; Defense of Democratic Institutions, 3.
Religious Faiths: Roman Catholics, 48% of population; tribal religions, 42%; Protestants, 8%; others, 2%.
Education: *Literacy rate* (1961)—12% of population aged 15 and over. *Total school enrollment* (1961)—67,216 (primary, 63,857; secondary, 2,519; teacher-training, 461; technical, 343; higher, 36).
Finance (1964): *Revenues,* $29,800,000; *expenditures,* $29,800,000; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1962): $89,300,000.
National Income (1963): $152,200,000; average annual income per person, $334.
Economic Index (1964): *Cost of living,* 111 (1962=100).
Crops (metric tons): Cassava (1962–63), 114,000; cocoa beans (1964–65), 4,200; coffee (1961–62), 400.
Minerals (1964): Manganese, 948,297 metric tons (ranks 6th among world producers); uranium ore (1963), 1,317 metric tons; gold, 42,760 troy ounces; crude petroleum, 7,668,000 barrels; natural gas, 353,000,000,000 cubic feet.
Foreign Trade (1964): *Exports,* $93,600,000 (chief exports: okoumé wood, $31,400,000; manganese, $23,300,000; petroleum, $12,700,000; uranium ore, $7,900,000); *imports,* $55,600,000 (chief imports, 1963: motor vehicles, $7,400,000; clothing, excl. fur, $2,100,000; machinery for special industries, $1,600,000). *Chief trading partners* (1963): France (took 50% of exports, supplied 60% of imports); U.S. (took 13% of exports, supplied 12% of imports); West Germany (took 13% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 3,635 miles (52 paved); *motor vehicles* (1964), 7,100 (automobiles, 2,500); *airlines,* Air Gabon, Transgabon; *principal airport,* Libreville.
Communications: *Telephones* (1964): 2,817; *television sets* (1963), 1,000; *radios* (1963), 30,000.

GAMBIA

On Feb. 18, 1965, Gambia (officially The Gambia) received its independence from Britain. It was the oldest and last remaining British dependency in West Africa. Stretching about 300 miles along the Gambia River to a depth of 6 miles on each bank, Gambia is the smallest African nation both in area and population. Except for its short Atlantic coastline, it is entirely surrounded by Senegal, a former French colony. After independence, Gambia retained its membership in the Commonwealth of Nations. The country was admitted to the United Nations on Sept. 21, 1965.

National Problems. Independence came after five years of discussion and detailed planning between the political leaders of Gambia and the governments

GAMBIA · Information Highlights

Area: 4,003 square miles.
Population: 330,000 (July 1, 1965, est.).
Chief Cities (1964 est.): Bathurst, the capital, 28,896.
Government: *Prime Minister,* David K. Jawara; *House of Representatives*—32 popularly elected members plus 4 chiefs; party seating (1965)—People's Progressive Party (19); United Party (13).
Religious Faiths: Muslims, 73% of population; Roman Catholics, 2%; others, 25%.
Education: *Total school enrollment* (1963)—13,447 (primary, 10,517; secondary, 2,708; teacher-training, 150; technical, 72).
Finance (1964 est.): *Revenues,* $5,964,448; *expenditures,* $7,491,736; *public debt,* $1,200,000; *monetary unit,* pound (0.3571 pound equals U.S.$1).
Crops (metric tons, 1963–64 crop year): peanuts, 93,000 (ranks 18th among world producers); rice, 31,000.
Foreign Trade (1963): *Exports,* $9,000,000 (chief exports, 1962: peanuts, $9,298,000; palm kernels, $249,200); *imports,* $12,000,000 (chief imports, 1962: cotton fabrics, $1,366,400; rice, $1,316,000; motor vehicles, $664,000). *Chief trading partners* (1962): Britain (took 35% of exports, supplied 40% of imports); Italy (took 56% of exports, supplied 1% of imports); Japan (took less than 1% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 730 miles (123 paved); *motor vehicles* (1964), 2,380 (automobiles, 1,280).
Communications: *Telephones* (1964): 921; *radios* (1961), 2,500.

DAVID K. JAWARA, prime minister of Gambia, speaks softly and lives modestly, in keeping with his acute awareness of the new nation's economic problems. He is trying to cut down the cost of government and to diversify the country's one-crop economy, which depends on exports of peanuts. "Everything we do," he has said, "is a question of pounds, shillings, pence." Jawara is the leader of the People's Progressive Party, which he helped form in 1959 to give a political voice to his fellow upcountry Gambians, and to advance the slow progress of Gambia toward independence.

Jawara, a Muslim, was born in 1924. He and his Christian wife have five young children. He was trained in Ghana and at the University of Glasgow as a veterinary surgeon, a career that he gave up in 1960 when he successfully ran for Parliament. He then became minister of education and, after the 1962 elections, premier. As prime minister from 1963 onward, he led his nation from self-government under Britain to complete independence.

UPI

of Britain and Senegal. The most important question was whether Gambia could survive as an independent state. Its economy depends for capital upon the export of peanuts in an increasingly competitive world market. Thus economic as well as geographic and ethnic factors seemed to dictate some plan for eventual political union with Senegal.

In 1963, Gambia's prime minister, David Jawara, requested a United Nations commission to report on whether Gambia and Senegal could effectively establish closer ties. The UN report stressed the need for immediate cooperation in various forms, leading eventually to the political rapprochement of the two countries. Three things, however, convinced Gambian leaders to try independence: internal political pressure, largely from Jawara's own party; an abortive political coup in Senegal; and disagreement over how soon a closer association should be made with the Senegalese.

Government. The constitution of the new state effected few changes in the structure of government. The crown-appointed governor relinquished his residual powers, and executive authority was vested in the prime minister and the ministry. They hold office at the pleasure of the House of Representatives. However, the House, on June 1, approved a resolution calling for a republic to be proclaimed on the first anniversary of independence (Feb. 18, 1966) and recommended that a plebiscite be held on the question. This proposal, violently opposed by the parties not in power, was defeated by the referendum held in the last week of November, failing by less than 800 votes to gain the necessary two-thirds majority. The original form of responsible government therefore remains unchanged.

Nationalism came late to Gambia. The strongest political party, the People's Progressive Party (PPP), was formed in 1959 and is led by Jawara. The major opposition group, the United Party (UP) led by P. S. N'Jie, was founded in 1951 as a purely municipal party of the capital, Bathurst, and did not play a countrywide role until 1960. N'Jie served as chief minister in 1961, but his party was defeated in the elections of 1962. Jawara has led the government since then, first to self-government and then to independence. There is little difference in the programs of the two major political parties. However, each is definitely a reflection of its leader.

No elections were held prior to independence, and the present composition of the Gambian parliament is based upon the elections of 1962. In December 1964, the PPP and UP agreed upon a form of coalition government. This compromise was never very effective and was abandoned shortly after independence.

In the present government, the governor is only theoretical chief executive. Actual power is exercised by the prime minister and the members of his cabinet. The 35 Gambian chiefs were an important factor in central government politics before 1960, but since 1962 they have become largely ornamental agents of local government. In 1965 they held only four guaranteed seats in parliament.

Economy. Since 1960, greater competition and larger crops have resulted in a lowering of world prices for peanuts. Because the Gambian economy is based on this crop, little can be done to substantially improve medical, educational, and communications facilities in Gambia. The government has been forced to rely on substantial grants-in-aid from Britain. Finance Minister Sherif Sisay stated that British aid would amount to £745,000 from Jan. 1, 1965, through June 30, 1966, and a further £360,000 for the subsequent 12-month period.

The United Nations is providing aid for a joint Gambian-Senegalese investigation of the long-range development of the Gambia River basin. The survey will not be completed, however, for five years. Meanwhile, pilot studies continue for the further encouragement of rice and citrus culture, as well as tourism. There is no real industry in Gambia and no known mineral potential. In order to free itself from inordinate dependence upon grants-in-aid, the government proceeded with reorganizations of several departments to attempt to balance its operating budget. Any real success for Gambia as an independent state will ultimately depend on agricultural development and economical government.

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GAMBIA'S INDEPENDENCE DAY, on Feb. 18, 1965, is celebrated by crowds awaiting the arrival of dignitaries.

LONDON DAILY EXPRESS

GARDENING AND HORTICULTURE

Water shortages affecting gardening and horticulture were extremely severe during 1965 in the drought-stricken northeastern United States. Throughout the country new developments in gardening, especially in urban and suburban areas, were adapted to the conservation of water. Home and commercial landscaping included more masonry and other structural elements to reduce maintenance requirements and the use of water.

National Developments. Public interest in city, state, and national landscape beautification received special attention after President Johnson's speech of February 8 on conservation and natural beauty. The United States had one garden for every five people in 1965—the highest ratio in the world. New home owners found that gardens increase the value of their property, beautify its appearance, and add to family prestige.

Indoor landscape gardeners made increasing use of fluorescent lighting to meet the light requirements of various kinds of plants. Indoor decorative plants grow best at room temperatures of 75° F during the day and 65° F at night.

A survey made during the year revealed that 57% of the nation's gardeners are women. A 26% increase in the number of schools assigning gardening plots to school children motivated horticultural interests among young people.

New Products and Findings. Organic chemicals for growth control became very popular for many kinds of plants. Proven growth retardants were Amo 1618, Bonine, Cycocil, and Phosphon, all supplied in varying concentrations by manufacturers. The additive effect of Kinetin on the growth-accelerating hormone gibberellin induced early opening of unchilled azalea buds. Chrysanthemum flowering was hastened by low night temperatures (60° F) for certain varieties, while higher night temperatures (84° F) delayed flowering. A mixture of a quinolin citrate and an amino succinamic acid, plus 3% sucrose, doubled the size of carnation plants during growth and more than doubled the life of cut flowers (to 16 days).

Young deciduous fruits were thinned out by chemical spray applications of new carbamates. Tea plants sprayed with gibberellin and other growth regulators contained less caffeine and more tannin, thus improving the taste quality of the tea. Three chemical growth retardants applied to rhododendrons increased flower production, especially on the lower branches of plants.

New synthetic flavors recently developed will affect the byproduct use of citrus fruit and mints. Scientists with the Glidden Company of Jacksonville, Fla., discovered how to convert turpentine into lemon and lime flavors. These scientists also synthesized spearmint and peppermint flavors. All four of these new products were approved by the Food and Drug Administration.

A newly developed product, cured lettuce, was considered as a possible substitute for tobacco in cigarettes.

New Plant Varieties. The diversity of plants available to gardeners was evidenced by the recognition of 24,000 species of cultivated plants, representing 4,000 genera. These cultivated species comprise 8% of the known flowering plants of the world. Several varieties, strains, and cultivars within many of the garden species added to the scope of available choices.

ALL-AMERICA FLOWER SELECTIONS

New varieties of old favorites—cosmos, verbena, and snapdragon—were among the 1966 All-America selections.

SUNSET COSMOS, the first red Klondyke cosmos (*left*), is a gold medal winner. Amethyst verbena (*below*) is a unique dwarf, compact, blue variety.

ALL-AMERICA SELECTIONS

BRIGHT BUTTERFLIES snapdragon (*above*) has spikes of open-face flowers in a well-balanced blend of colors.

During 1965, more than 100 new plant patents were issued to horticultural plant developers by the U.S. Patent Office. Most of the new patents were for roses, gladioli, chrysanthemums, and grapes. Plant patent 2500 was assigned to the Conard-Pyle Company for the new rose, Adventure, hybridized by Paul Croix of France. Two new cantaloupe varieties for desert conditions, Campo and Jacumba, were developed cooperatively by federal and state scientists. New vegetable varieties introduced in 1965 were Crimson Sweet watermelon, Forzini hybrid squash, Formanova beet, Garnet beet, Minetto lettuce, Princess Anne blackeye southern pea, and Roma V F tomato.

All-America Selections. All-America Rose selections for the 1966 planting included two hybrid teas and a floribunda. American Heritage, one of the hybrid teas, is ivory yellow tinged with red. The mature flower is up to 5 inches across and has 50 petals. It was hybridized by Dr. Walter Lammerts and introduced by Germains. Matterhorn, a white hybrid tea, is vigorously free blooming and has long-stemmed flowers. It was introduced by Armstrong Nurseries. Apricot Nectar, a large-flowered floribunda with apricot-colored blooms, is the ninth All-America floribunda developed by hybridizer Eugene S. Boerner and introduced by Jackson and Perkins.

All-America flower selections for 1966 included the first gold-medal winner in 27 years—Sunset cosmos, the first red variety of this commonly yellow annual. Other winners also represented color breakthroughs—Red Monarch, the first solid red sweet william, and Amethyst, the only skyblue dwarf verbena. Spun Yellow marigold, Bright Butterflies snapdragon, and two pansies, Majestic White with Blotch and Giant Majestic Mixed, also received All-America awards.

Vegetable winners in the 1966 All-America selections were the Gold Nugget squash and Butter King lettuce.

New Books. Books published in 1965 reflected the recent trends in American gardening. Garrett Eckbo's *Urban Landscape Design* provides a creative idea source for city and community beautification, and includes many helpful illustrations. *Fluorescent Light Gardening* by E.C. Cherry provides helpful aids to indoor gardeners.

Concern over the toxic effects of many garden plants stimulated interest in *Poisonous Plants of the United States and Canada* by John M. Kingsbury, a botanist at Cornell University. Approximately 1,000 plant species are known to cause death or illness. For example, the leaves of the oleander, peach, and poinsettia are extremely toxic.

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GARDNER, John W. See biographical sketch under United States.

GAS

The marketed production of natural gas in the United States in 1964 increased by 800 billion cubic feet over 1963 (see Table 1). According to the U.S. Bureau of Mines, the marketed output in the first half of 1965 was 8,028 billion cubic feet, compared with 7,751 billion in the first half of 1964.

Consumption. Use of natural gas in the United States was 15,536 billion cubic feet, an increase of 6% over 1963. Consumption in 1964 by class of consumer (with percentage of change from 1963) was (in billion cubic feet): residential, 3,787 (up 6%); commercial, 1,375 (up 8%); industrial (excluding gas used in the field and in carbon black), 8,174 (up 8%); field use, 2,093 (up 1%); and carbon black, 107 (down 9%).

Table 1—MAJOR PRODUCERS OF NATURAL GAS
(In billions of cubic feet[1])

Country	1961	1962	1963	1964
Algeria	8.62	13.19	14.72	30.18
Argentina	87.94	110.09	125.56	148.50[2]
Austria	58.07	61.01	63.41	65.83
Brunei	3.01	2.99	2.38	...
Canada	655.74	946.91	1,117.43	1,363.81
Chile[3]	95.12	132.84	192.40	235.17
Colombia[3]	16.95	22.40	21.73	...
France	151.95	176.89	195.01	194.36
Germany, West	17.96	23.01	34.15	54.37
Hungary[3]	12.08	12.69	22.83	29.25
Indonesia[3]	95.58	101.21	104.42	...
Iran	104.22	107.16	108.51	...
Italy	256.12	266.86	271.23	286.79
Japan[3]	35.46	45.12	63.24	69.37
Mexico[3]	381.03	392.42	424.37	...
Pakistan	34.67	42.08	49.46	59.10
Peru	33.71	35.15	37.35	45.13
Poland	26.96	29.53	35.28	45.93
Rumania	268.60	329.81	376.97	426.07
Trinidad	29.38	30.12	29.69	42.11
United States	13,254.03	13,876.62	14,746.66	15,546.59
USSR	2,272.79	2,806.46	3,414.78	4,105.35
Venezuela	200.18	214.25	230.19	250.90

[1] Excluding gas used for repressuring, as well as gas flared, vented, or otherwise wasted. [2] Including gas for repressuring and gas wasted. [3] Estimate. (Source: U. S. Bureau of Mines.)

Gross injections to underground storage in 1964 totaled 1,015 billion cubic feet, with withdrawals totaling 885 billion, for a net increase in storage of 130 billion cubic feet.

Shipments. Interstate shipments in 1964 totaled 9,428 billion cubic feet—an increase of 4% over 1963. Exports of gas totaled 20 billion cubic feet (a 17% increase over 1963), of which 9.763 billion went to Canada and 9.840 billion went to Mexico. Imports of natural gas in 1964 totaled 443 billion cubic feet (9% more than in 1963), including 391 billion from Canada and 52 billion from Mexico. The value of natural gas at the wellhead in 1964 was $2,387,689,000, for an average of 15.4 cents per thousand cubic feet. (See also Federal Power Commission; Petroleum.)

Table 2—MAJOR PRODUCERS OF MANUFACTURED GAS
(In billions of cubic feet)

Country	1961	1962	1963	1964
Australia	103.00	104.79	54.19[1]	55.53[1]
Austria[1,2]	12.27	14.60	15.85	15.99
Belgium	90.02	97.63	102.11	109.27
Canada	55.98	55.98	60.91	...[3]
Czechoslovakia	167.94	187.64	199.74	208.25
Denmark	14.69	15.14	15.00	14.33
France[4]	280.35	283.03	286.62	122.26
Germany, East	124.50	130.32	133.90	130.77
Germany, West[5]	926.58	918.52	891.20	932.85
Italy	88.22	94.94	97.63	91.36
Japan[6]	186.30	193.47	194.81	209.59
Netherlands	153.61	152.27	154.06	158.98
Poland[6]	200.63	209.59	215.86	210.00
Spain	14.38	15.00	14.87	14.82
United Kingdom[7]	817.76	801.19	813.73	698.63
United States[8]	777.95	766.10	800.58	904.70

[1] Gasworks only. [2] Vienna only. [3] Data not available on a comparable basis. [4] Sales (in 1963 about 44% of total production). [5] Including Saar. [6] Approximately 95% of total production. [7] Beginning in 1964, gas produced and purchased by gasworks (in 1963 about 88% of total production). [8] Coke-oven gas. (Source: *Monthly Bulletin of Statistics*, November 1965. United Nations, N.Y.)

Europe. Gasfields were discovered in France, Italy, and Austria in 1964, and discoveries in the Netherlands increased estimated Dutch reserves to 39 trillion cubic feet of gas, or 40 times the total annual consumption in the Netherlands.

Berenice B. Mitchell
Supervisory Statistical Officer, Division of
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GENETICS

The 1965 Nobel Prize in physiology and medicine was awarded to three French scientists—François Jacob, André Lwoff, and Jacques Monod—for their research on the genetic regulation of gene action in viruses and bacteria. Their work was done at the Pasteur Institute of Paris. (See also NOBEL PRIZES.)

Other advances in genetics in 1965 included the test tube synthesis of RNA genes, further determination of the composition of a specific gene, and studies of methods to repair gene mutations.

Anatomy of a Gene. Transfer ribonucleic acid (tRNA) is a polyribonucleotide composed of a relatively small number of ribonucleotide units joined together to form a single chain. Therefore, tRNA has been investigated intensively to elucidate its structure. In 1965, R.W. Holley and his associates isolated from yeast a type of tRNA that transports an amino acid called alanine. They found that this type of tRNA contains 77 ribonucleotide residues and that its sodium salt has a molecular weight of 26,600. They were also able to determine the complete nucleotide sequence in this type of tRNA. This is the first time that a complete sequence of a polyribonucleotide has been determined.

The usual types of bases (molecular subunits) in RNA include adenine (A), uracil (U), cytosine (C), and guanine (G). Some of the 77 ribonucleotide residues in tRNA contain other bases. These include hypoxanthine, 1-methylhypoxanthine, pseudouracil, 5-methyluracil (thymine, or T), 5, 6-dihydrouracil, 1-methylguanine, N^2-dimethylguanine, and a mixture of uracil and 5, 6-dihydrouracil.

All of the RNA in a cell is normally produced by the transcription of double-stranded deoxyribonucleic acid (DNA) templates. (The process of synthesizing nucleic acids from nucleic-acid templates is called transcription). Therefore, the studies directed by Holley also have elucidated most, if not all, of the sequence of the deoxyribonucleotides that comprise the gene whose transcript is this type of tRNA.

Repairing Mutations. It has been known that ultraviolet radiation is powerful in producing gene mutations. Some ultraviolet-induced mutations of genes probably involve either the breakage of nucleic-acid strands or the conversion of cytosine (C) to uracil (U). However, it is now known that a large fraction of the ultraviolet-induced mutations is due to other reactions. These reactions cause two identical adjacent bases to become chemically linked and, therefore, to form a dimer (a compound composed of two identical subunits). Dimers of thymine (T), cytosine (C), and uracil (U) are produced.

In 1965, investigations by R.B. Setlow, W.L. Carrier, R.P. Boyce, P. Howard-Flanders, and others showed that mutations based on dimer formation can be repaired in two ways. In the first, the two subunits of a dimer unlink and change back to the original two monomers of T or C or U. This occurs after a dimer is exposed to ultraviolet radiation that has a shorter wavelength than the radiation that was used to induce the dimer formation. This decomposition also occurs when a dimer is exposed to visible light in the presence of an enzyme. In the second way, an enzyme excises the dimer from the strand that contains it. It is probable that the undamaged strand of the double-stranded nucleic acid then acts as a template for the enzymatic synthesis of a normal segment for the defective region where the dimer was excised.

The second way is important because recovery from similar cross-linking mutations that are induced by a chemical substance—a nitrogen mustard—also may involve the same repair mechanism. Such an error-correcting mechanism is important in the preservation of genetic information, and perhaps also in the recombination of genetic material under normal conditions.

Gene Synthesis. DNA synthesized *in vitro* was found to be biologically active in 1963. In 1965, S. Spiegelman and coworkers were able to synthesize *in vitro* replicas of the RNA genetic material of a bacteriophage. These replicas are biologically active; this is proved by their ability to infect their bacterial host and produce mature bacteriophage. Not only is biologically active RNA synthesized *in vitro*, but the RNA product is indistinguishable from the original RNA used as the template. (See also BIOCHEMISTRY.)

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GEOGRAPHY AND EXPLORATION

Although natural forces continued to alter the earth's surface in 1965, faster-moving political events caused most of the map changes. Three new nations were established as independent states: The Gambia, in western Africa; Singapore, which seceded from Malaysia; and the Maldive Islands, in the Indian Ocean.

Place Name Changes. In England, reorganization of the Greater London area, approved by Parliament in 1963, took concrete shape with the creation of a new London County by adding parts of Essex, Kent, Surrey, and Hertfordshire, and all of former Middlesex County.

In Canada, the Hamilton River and Grand Falls in Labrador were renamed Churchill River and Churchill Falls in honor of Sir Winston Churchill.

Volcanic Changes. Surtsey, the volcanic isle that blasted forth from the sea off Iceland in 1963, increased by about one acre a day in 1965, attaining an area of some 2.5 square miles. American and Icelandic scientists, working under sponsorship of the U.S. Office of Naval Research, are studying Surtsey to see how life gradually takes hold there. As the land surface cools, bacteria and molds will flourish. Green algae already have appeared.

An ownership dispute has arisen in Hawaii over sea-front land created by the eruption of Kilauea volcano in 1960. The upheaval deposited 600 acres between beach-front properties at Hilo and the sea's edge. Individuals claimed the new land and paid taxes on it, but in 1965 Hawaii's deputy attorney general upheld state ownership.

Exploration. Valiant mountaineers continued to challenge Mount Everest, the world's loftiest and most inhospitable mountain. Following in the footsteps of British, Swiss, and American expeditions, Indians outdid them all in May 1965 by sending four teams totaling nine men to the 29,028-foot summit. There they found the aluminum flagpole which had been left on May 1, 1963, by the American climber James W. Whittaker and Nawang Gombu, a Nepalese Sherpa guide. As Gombu was a member of India's first team, he has the distinction of being the only man in history to climb Everest twice.

On the opposite side of the world, the highest previously unscaled mountain in North America was

UPI (ABOVE); BLACK STAR (RIGHT)

SENATOR ROBERT F. KENNEDY (*right*) stands at the summit of 13,905-foot Mount Kennedy (*above*), the Canadian peak named for his brother, the late president. He scaled the peak on March 24, 1965.

climbed on March 24, 1965. It had been named for the late President John F. Kennedy in 1964 by the Canadian government. Mount Kennedy's snow pinnacle thrusts 13,905 feet high, just east of the Alaska-Yukon border in the St. Elias Mountains. Mount Kennedy and neighboring peaks were discovered by Dr. Bradford Washburn while leading the 1935 National Geographic Society Yukon Expedition to map some 5,000 square miles of unknown terrain. In the spring of 1965 the society and the Boston Museum of Science sponsored Dr. Washburn's mapping-climbing expedition to Mount Kennedy. Climbers who made the first ascent included Senator Robert F. Kennedy, the late president's brother; and James W. Whittaker and Barry W. Prather, who were members of the 1963 American Mount Everest Expedition.

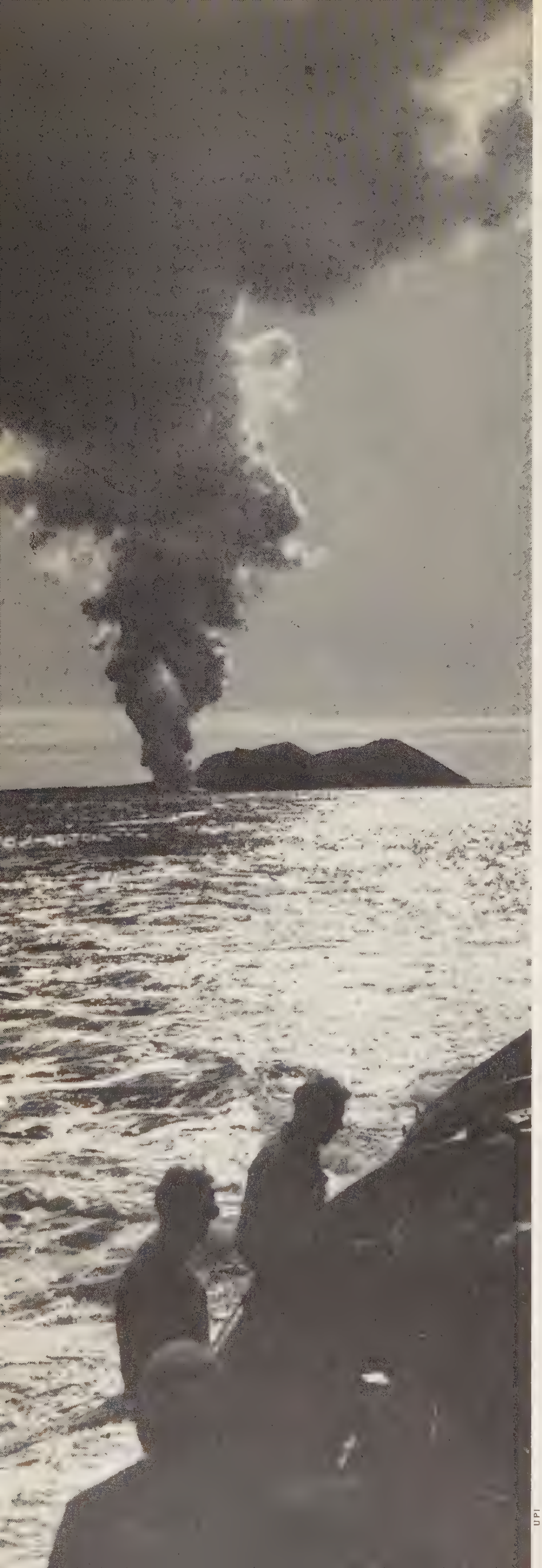
At the bottom of the earth, American scientists made a 900-mile journey across Antarctica, verifying a Soviet report that a mountain range lies buried beneath the continent's mantle of snow and ice near the South Pole. The United States concluded one of its most successful Antarctic seasonal operations with the return home in April 1965 of Rear Adm. James R. Reedy's Task Force 43, comprising nearly 3,700 officers and men. Admiral Reedy guided the first direct flight from Australia to Antarctica, the route being from Melbourne to the South Pole and thence to Byrd Station in Marie Byrd Land. A sixth American base, Palmer Station on Anvers Island, was constructed for biological and glaciological research. (See also ANTARCTICA.)

In the Arctic, famed ice island Arlis II broke up and passed into polar history. The drifting island, first sighted in April 1959 by Canadian surveyors, may have been a fragment from Ellesmere Island's ice shelf. In 1961 the United States established a research station on Arlis II. Propelled by wind and current, the island carried Americans and visiting scientists from many countries some 5,000 miles about the Arctic Ocean. It meandered two or three miles a day on the average. Personnel had to be evacuated from Arlis II before June 1965 when the diminishing island floated into the Greenland Sea on its way to the warmer North Atlantic and oblivion. (See also ARCTIC REGIONS.)

Applied Geography. Professional geographers in the United States were called increasingly into community and regional planning under such new federal programs as the Public Works and Economic Development Act of 1965. Geographers brought to urban-renewal programs and the antipoverty program in Appalachia a sophisticated sense of how human beings are affected by their surroundings. They also fostered a greater awareness of the interrelated actions that can be taken to promote an upsurge in local and regional growth.

Academic Geography. Eminent geographers became involved in elementary and secondary geographic education in 1965 to a greater extent than ever before. Under Title XI of the National Defense Education Act, more than $2 million was spent during the summer for the Advanced Institutes of Geography. The chief objective of the institutes is to improve the proficiency of geography teachers at the elementary and secondary school levels, and to keep them acquainted with the latest procedures and research.

National Atlas. The first maps of the new *National Atlas of the United States,* eagerly awaited by professional geographers, were scheduled to be published by early 1966. The first plates depict both the physical characteristics and the historical



development of the United States. They include the country's geology, land forms, and territorial growth. The project was undertaken in fiscal year 1963 by the U.S. Geological Survey.

U.S. Board on Geographic Names. The board observed its 75th anniversary September 2. In a ceremony commemorating the founding, Interior Secretary Stewart L. Udall said the board's work in standardizing hundreds of thousands of names has saved servicemen's lives and "fantastic amounts of money." Observing that oceanography is a rapidly developing science, he added: "Names are needed for previously uncharted and unnamed features of the ocean floors. New kinds of features that are being discovered require new terms and definitions." An advisory group to the board is now concentrating on this and related problems.

National Geographic Society. The society made grants for 40 new and continuing explorations and research projects in 1965. One grant went to Capt. Jacques-Yves Cousteau, the French undersea pioneer, for a new type of lightweight one-man submarine that can descend to 10,000 feet—far deeper than the range of Cousteau's "diving saucer."

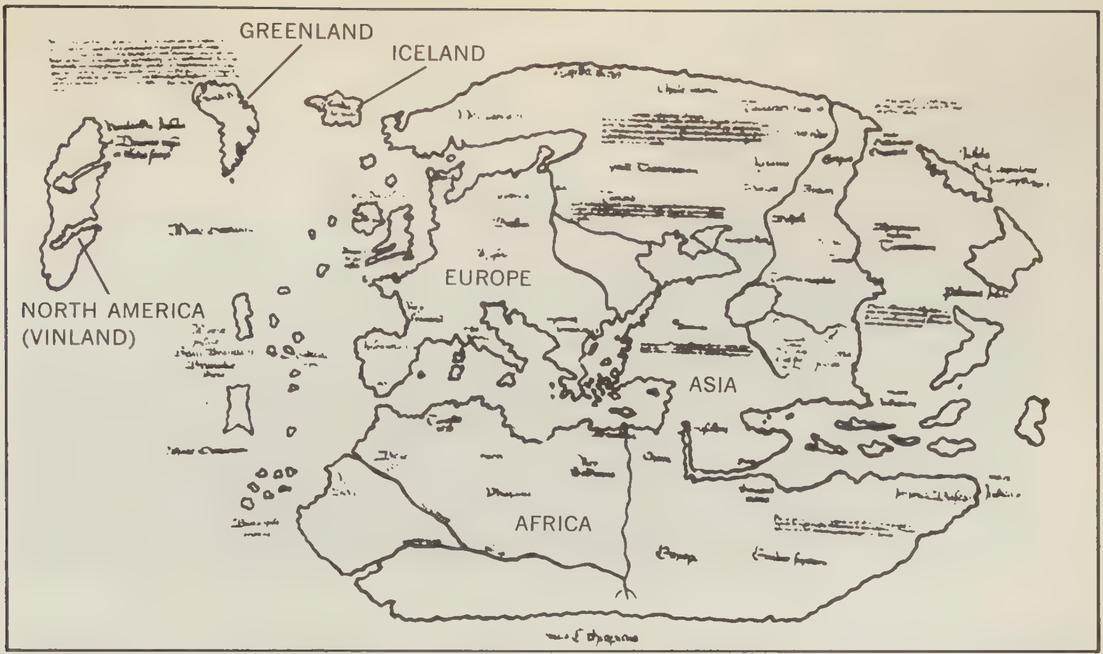
National Geographic added the new dimension of color television to its magazine and book publishing activities in the fall of 1965. *Americans on Everest,* the first of four hour-long films of exploration and discovery scheduled for the 1965–66 season, was telecast September 10 on the CBS network and won enthusiastic critical acclaim.

Two new natural history books were published by National Geographic: *Wondrous World of Fishes,* describing and illustrating 340 species found in North American and Hawaiian waters; and *Water, Prey, and Game Birds of North America.* As a public service, the society continued its program of producing books about the nation's institutions and shrines. It contributed the photography, art, and editorial services for *George Washington: Man and Monument* and *Equal Justice Under Law: The Supreme Court in American Life.* The two books were published respectively by the nonprofit Washington National Monument Association and the Foundation of the Federal Bar Association. Maintaining close cooperation with the White House Historical Association, the society produced *Presidents of the United States of America* as a companion volume to the earlier *White House Guide Book.*

The society's Geographic Research Department helped the National Aeronautics and Space Administration choose a site for a big "eye chart" on the ground to help test the vision of orbiting astronauts. The plan to lay out vast eye charts—in the form of ground squares in checkerboard pattern with some panels marked in a white material—was developed after several astronauts reported seeing geographic features of the earth in surprising detail. Following a survey, the society recommended a site in western Australia that NASA inspected and found to be excellent.

American Geographical Society. In 1965 the society published "Surface Circulation on the Continental Shelf off Eastern North America Between Newfoundland and Florida," folio 7 in its *Serial Atlas of the Marine Environment.* Two new folios

BIRTH OF AN ISLAND is watched by scientists as they approach the smoking vent of a volcano off coast of Iceland near two-year-old Surtsey Island in the background.



UPI

"VINLAND" WORLD MAP, drawn about 1440, went on display at Yale University on Oct. 12, 1965. It is the only known map made before Columbus' first voyage that shows part of the New World. The island at far left is labeled Vinland, the part of North America discovered by the Viking, Leif Ericson, in the 11th century.

were published in the *Antarctic Map Folio Series:* "Aeronomical Maps for the Antarctic" and "Physical Characteristics of the Antarctic Ice Shelf."

Conferences. The 8th General Assembly of the Pan American Institute of Geography and History met in Guatemala City from June 25 to July 10. The Consultation on Geography prepared a list of specific projects to be undertaken in priority sequence as funds become available. Among them are studies in resources inventory and use, urban redevelopment and planning, a glossary of geographic terms, and a more effective publications program.

THE NATIONAL GEOGRAPHIC SOCIETY

GEOLOGY

Photographs of the Martian surface taken by the Mariner 4 spacecraft in 1965 provided important new data on the history of Mars. New data on the evolution of life on earth were obtained by analyses of fossils found in ancient rocks. Active exploration of the earth's subsurface continued in 1965.

Astrogeology. The Mariner 4 pictures of Mars, covering about 1% of the planet's surface, show 70 craters, 2.5 to 75 miles in diameter. If the photographed area is a representative sample of the entire surface of the planet, there are some 10,000 craters on Mars.

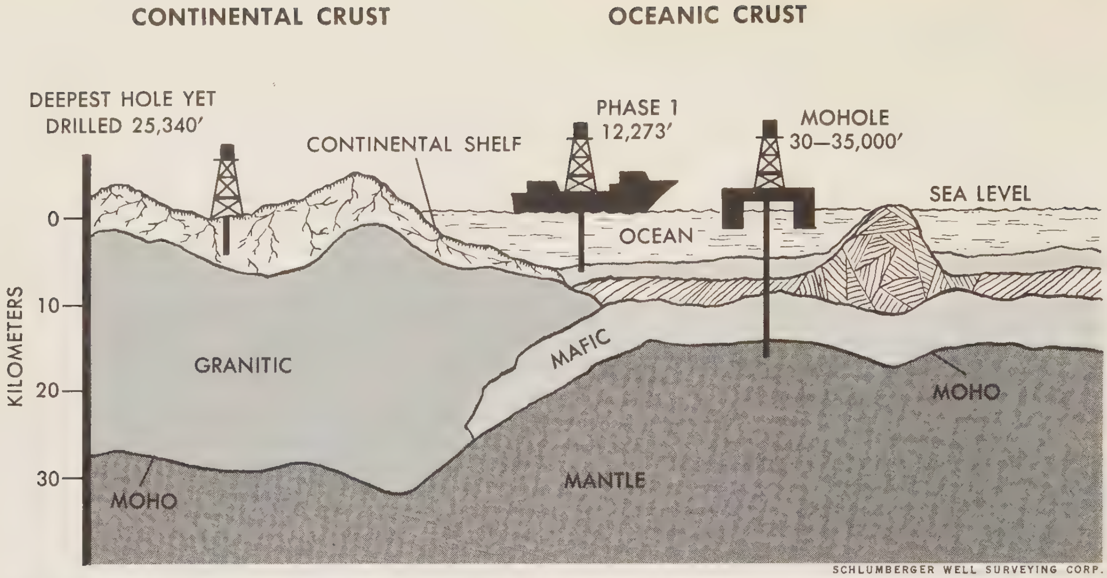
The expected number of craters would be very much greater than the number estimated from the Mariner 4 data if the Martian surface were very old. The apparent discrepancy between the expected number and the estimated number suggests that the craters on Mars are comparatively young—perhaps no more than 300 to 800 million years old. (The planet itself is estimated to be 4.5 billion years old—the same age as that estimated for the earth.) If the craters are 300 to 800 million years old, it may be that older craters were never formed, perhaps because the earlier Martian atmosphere was dense enough to block meteor impacts. Another hypothesis is that water or some other agent eroded craters during the first 3.5 or 4 billion years of Mars' existence.

The weakness or absence of a magnetic field that could trap particles near Mars indicates that high-energy particle interactions are generated near or below the Martian surface, rather than in the atmosphere, as on earth. If this is true, then the production of radioactive and stable isotopes is concentrated beneath the surface of Mars.

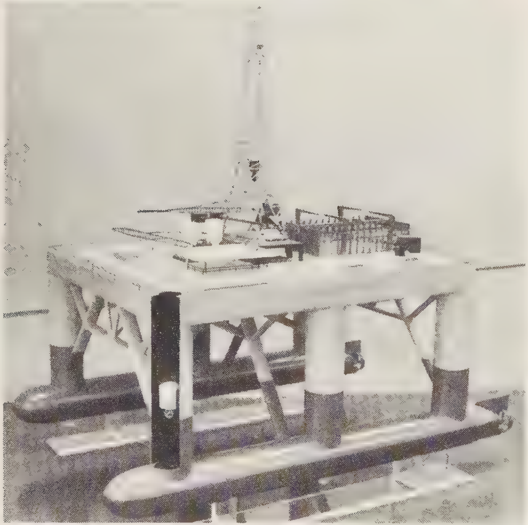
The Mariner 4 data on the thinness of the Martian atmosphere indicate that it is transparent to ultraviolet radiation. The polar caps (not photographed by Mariner 4) are very good reflectors of ultraviolet radiation, as is snow. Other seasonal color changes (reddish to greenish) could be produced by radiation-induced movements of electrons. These electrons might move into certain silicate structures during the winter and move out of them during the summer.

Lack of water in the present Martian atmosphere, intensity of solar radiation, production of radioactive isotopes near and immediately below the surface, and atmospheric transparency to ultraviolet radiation decrease the possibility that even the more simple organisms, such as bacteria, spores, fungi, viruses, and protozoa, can exist on Mars. However, the apparent youthfulness of the surface permits speculation that water once may have been present, that organisms once lived, and that a fossil record may exist.

No earthlike features, such as mountain chains, valleys, ocean basins, and continental masses can be recognized in the Mariner 4 photographs. Principal topographic features on Mars have originated through meteor impact rather than through deformation produced by internal stress, as on earth.



SCHLUMBERGER WELL SURVEYING CORP.



UPI PHOTO

PROJECT MOHOLE, sponsored by National Science Foundation, is an effort to drill world's deepest hole to obtain the first samples of the earth's mantle *(above)*. Schematic diagram also shows phase 1 of project, which tested feasibility of Mohole scheme. Drilling rig *(left)* will sink the shaft.

The findings of Mariner 4 seem to emphasize earth's uniqueness in the solar system. (See also ASTRONOMY; SPACE EXPLORATION.)

Paleontology. Two widely separated rock formations that are more than 2.7 billion years old almost certainly contain materials of organic origin. The Soudan Formation, near Tower, Minn., contains hydrocarbons that very probably are remains of primitive organisms. The Dolomite Series, near Bulawayo, Southern Rhodesia, contains the oldest known structures that are directly analogous to structures built by the activity of much later organisms. It is generally accepted that the organisms that produced the forms in the Dolomite Series are closely related and possibly ancestral to modern algae.

Well-preserved microfossils in the base of the Gunflint Iron Formation (1.9 billion years old) along the north shore of Lake Superior include septate and nonseptate threads, cellular-walled spheroids, and perforate spheroids. These fossils are believed to be ancestral to or near relatives of certain bacteria and blue-green algae. The fossils provide evidence that photosynthetic organisms evolved at least two billion years ago.

Porphyrin derivatives of chlorophyll associated with these photosynthetic organisms are evidence that oxygen was becoming available, at least in the vicinity of the photosynthetic organisms. Thus, this may have been a time when the atmosphere was in an intermediate stage of evolution toward the oxygen-rich atmosphere that had developed by the beginning of the Cambrian period or perhaps earlier.

The base of the Nonesuch Formation (one billion years old) near White Pine, Mich., contains crude oil, optically active alkanes, porphyrins, isoprenoid hydrocarbons, and microfossils of several types. The presence of porphyrins suggests that organisms that existed at this time were metabolically similar to living forms.

A find in late Precambrian rocks of the Bitter Spring Formation (estimated to be 700 to 900 million years old) near Alice Springs, Australia, includes well-preserved algal filaments and aggregates of single cells in chert. They bring the record close to the time that abundant fossils occur.

Transcontinental Geophysical Study. The U.S. Geological Survey is mapping the subsurface structure of the United States. The survey, which extends from coast to coast and into deep ocean water, will map subsurface structure to depths ranging up to 600 miles. Subsurface mapping is accomplished by boring holes, setting off explosives, and using seismographs to measure the shock waves.

Mohole. In 1965 the National Science Foundation announced plans to begin construction of a drilling platform for the Mohole project. The platform, which is expected to be completed in 1968, will be located in the ocean about 100 miles north of Maui, Hawaii. The goal of the project is to place a shaft down to the ocean floor, at a depth of about 2.5 miles, and then to drill through about 3.2 miles of sediment and crustal rock to obtain samples of the earth's mantle.

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GEORGIA

Racial strife in Georgia in 1965 touched all areas of state life—schools, churches, housing, politics, and business. White reprisals against Negroes who took part in racial demonstrations often took the form of loss of jobs, eviction from homes, and foreclosures on mortgages. In some instances, white sympathizers with the Negroes suffered similar reprisals. Among the cities hardest hit by racial strife were Americus, Crawfordville, Lincolnton, Savannah, and Washington—all located in either central or southern Georgia.

Integration. The all-white schools in Taliaferro County were closed for the 1964–65 school year to avoid integration. The county's white children and a few Negro children were transported by bus to schools in adjoining counties.

The 2,000-member congregation of St. John's Episcopal Church in Savannah, the largest in the state, voted in April to withdraw from the Episcopal Diocese of Georgia in an effort to bypass integration of their church.

Elections. In a special election on June 16, called to implement the reapportionment of state election districts, the Democratic party lost 13 seats to the Republicans in the Georgia House of Representatives. Eight Negroes won seats. When the legislature convened in January 1966, the new 205-member House of Representatives had 185 Democrats and 20 Republicans. In the Democratic primary run-off election for alderman in September, Q.V. Williamson of Atlanta, a Negro, defeated Jimmy Vickers, alderman of the 3rd ward, by a margin of more than three to one. In the November election, Williamson became the first Negro elected to the city board of aldermen since the 1870's.

Voting Rights Act. The population of Georgia is composed of slightly more than 3 million whites and approximately 1.2 million Negroes. In 35 counties Negroes outnumber whites, and in 30 counties the ratio is nearly equal. With the implementation of the federal Voting Rights Act of 1965, the number of Negroes holding office at state, county, and municipal levels is expected to increase.

Loyalty Oath. The Georgia chapter of the American Civil Liberties Union, on behalf of the American Association of University Professors and 165 Georgia college teachers, brought suit against the state in connection with the wording of a loyalty oath. As a result, the oath was altered to conform more nearly to the wishes of the professors.

Sports. Owners of teams in the National Football League, meeting in New York City in June, voted to add Atlanta to their schedule in 1966. The Atlanta team will play its home games in the city's new $18 million stadium. The Atlanta Braves National League baseball team also planned to play their 1966 home season in the new stadium.

Legislation. In the Georgia General Assembly in 1965, the Senate enacted 95 bills, and the House of Representatives, 463.

Legislation enacted included a statute that makes it unlawful to sell or exhibit obscene literature to any person under the age of 18. Another bill requires certain medical personnel to report any cases that they discover of cruel treatment of children, and grants them immunity from any civil or criminal liability for making such reports.

An education bill created a Georgia Scholarship Commission for the purpose of granting scholarships for paramedical training to qualified Georgia residents who otherwise would not have the funds to finance a program of study.

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GEORGIA · Information Highlights

Area: 58,876 square miles.
Population: 4,312,000 (1965 est.).
Chief Cities (1965 est.): Atlanta, the capital (535,000); Savannah (141,000); Macon (128,000); Columbus (125,000); Augusta (67,000); Albany (64,000); Athens (42,500); East Point (41,000).
Government: *Chief Officers*—governor, Carl E. Sanders (Democrat); lt. gov., Peter Z. Geer (D); secy. of state, Ben W. Fortson, Jr. (D); atty. gen., Arthur K. Bolton (D); treas., Jack B. Ray; supt. of schools, Claude L. Purcell; chief justice, William H. Duckworth. *Legislature*—General Assembly (convened January 1965); Senate, 54 members (44 Democrats, 9 Republicans, 1 Independent); House of Representatives, 205 members (198 D, 6 R, 1 vacancy).
Education: *School enrollment* (1964–65)—public elementary, 716,349 pupils (23,108 teachers); public secondary, 363,515 pupils (15,146 teachers); nonpublic schools, 30,200 pupils (1,280 teachers); college and university (fall 1964), 69,527 students. *Public school expenditures* (1964–65)—$312,518,000 ($330 per pupil); teacher's average salary, $5,050.
Public Finance (fiscal year 1964): *Revenues,* $833,044,000 (sales tax, $185,424,000; motor fuel tax, $99,597,000; federal funds, $214,171,000). *Expenditures,* $761,286,000 (education, $301,631,000; health, welfare, and safety, $122,356,000; highways, $164,943,000). *State debt,* $16,000.
Personal Income (1964): $8,345,000,000; average annual income per person, $1,943.
Public Assistance (fiscal year 1965): $102,834,115 to 191,426 recipients (aged, $62,758,736; dependent children, $18,553,347).
Labor Force (employed persons, July 1965): *Agricultural,* 100,200; *nonagricultural* (wage and salary earners), 1,233,100 (32% manufacturing, 21% trade, 18% government). *Unemployed persons* (July 1965)—50,800.
Manufacturing (1963): Value added by manufacture, $2,102,332,000 (transportation equipment, $515,766,000; primary metals, $34,653,000; nonelectrical machinery, $91,281,000; electrical machinery, $73,499,000; fabricated metals, $106,758,000; food and products, $437,756,000).
Agriculture (1964): *Cash farm income,* $905,258,000 (livestock, $459,072,000; crops, $406,770,000; govt. payments, $39,416,000). *Chief crops* (tons)—corn for grain, 1,961,568 (ranks 12th among the states); peanuts, 403,200 (rank, 1st); cottonseed, 257,000 (rank, 8th); tobacco, 62,198 (rank, 6th); sweet potatoes, 51,000 (rank, 5th); peaches, 43,200 (rank, 6th); rye, 23,520 (rank, 9th).
Mining (1964): *Production value,* $127,958,000. *Chief minerals* (tons)—iron ore, 396,000 (ranks 11th among the states); barite, 109,228 (rank, 4th); clays, 4,365,000.
Fisheries (1964): *Commercial catch,* 18,338,497 pounds ($2,973,071). *Leading species*—crabs, 11,531,863 pounds ($471,819); shrimp, 5,938,731 pounds ($2,298,136).
Transportation: *Roads* (1963), 96,260 miles (57,962 paved); *motor vehicles* (1964), 1,879,000; *railroads* (1963), 5,745 miles; *civil aircraft* (1964), 2,213 (161 airports).
Communications: *Telephones* (1965), 1,575,300; *television stations* (1964), 11; *radio stations* (1964), 173; *newspapers* (1965), 31 (1964 daily circulation, 1,059,028).

ATLANTA'S NEW STADIUM will be the home of the city's new professional baseball and football teams.

ATLANTA CHAMBER OF COMMERCE

GERMAN LITERATURE

The best works published in 1965 show how far German literature has risen above the chaotic negativism that followed World War II. In returning to the essence of poetic art—concentration, imagery, and form—German belles lettres is finding a sane equilibrium and has contributed greatly to the development of a new spiritual milieu in Germany.

Fiction. Several outstanding collections of stories were published in 1965. Jack Bilbo's *Das geheime Kabinett der sonderbaren und grauenvollen Geschichten* reflects the anarchic adventures that form the core of his earlier autobiography, *Rebell aus Leidenschaft.* The stories are partly true and partly fictional. Each, however, is a perfect reflection of the author's grotesque humor, rooted in the realm of the absurd and the horrific.

The central elements of Edzard Schaper's *Gesammelte Erzählungen* are catchwords of metaphysical quality—freedom, conscience, faith, guilt, grace. Nevertheless, he treats them totally in literary fashion. Dialogue is seldom employed, the author preferring indirect discourse. Everything is cast in parable form, the importance of which lies in the theological-metaphysical truth that shines through the external action, rendering transparent the actual "reality" behind the events.

The anthology *Vor dem Leben,* compiled by Martin Gregor-Dellin, is subtitled *Schulgeschichten von Thomas Mann bis Heinrich Böll.* This collection has both pedagogical and literary value, because the stories reflect not only the literary development of the modern German, but his political and social maturation. The basic theme of the stories might be epitomized: "from tyrant-professor to comrade." It traces the attitude of the contemporary German toward authority, as embodied in formal education.

Among the important novels of 1965 was Karl Garbe's *Soldbuch.* It revives the horrors of the last days of World War II in the daily life, the reveries of the past, and the fearful hopes of the future of the undoubtedly autobiographical hero. Essentially an act of courage on the part of the author, *Soldbuch* might have been subtitled "Lest We Forget."

KONRAD ADENAUER, former West German chancellor, displays his *Memoirs 1945–1953* at Frankfurt Book Fair.

KEYSTONE

KONRAD
ADENAUER

Ernst Weiss' *Der arme Verschwender* was originally published in the Netherlands in 1936. Rediscovered in 1965, it represents the German-Jewish literature that Hitler sought to destroy. The novel, obviously semiautobiographical, is written in diary form. It portrays the psychological crisis of a young doctor torn between the need to honor his father's wishes and the desire to assert his own individuality.

Poetry. Hermann Kasack's interest in the Chinese element in art, in China, and in all things Chinese is reflected in his *Wasserzeichen.* This collection of poems envisions man as still an organic part of nature, and employs a free rhythm reminiscent of oriental meditations. Marie Luise Kaschnitz' *Gedichte* shows a decided change in her outlook on life and her fellowmen. Grief now preponderates in a world that is inimical and full of wounds; the roses are now gray. Her lyric expression is more precise and perhaps more meaningful. In every poem her principal concern is the future possibilities of man as a social being whose quest for God has cast before him the inescapable choice between despair and hope.

Agnes Miegel's *Gedichte, Erzählungen, Erinnerungen* can best be described as the expression of her most poignant characteristics: rootedness in the East Prussian homeland of her forebears and in their inherited customs; a gentle faith interspersed with symbolic, almost secretive, traits; and a simple direct clarity of expression. In this collection of poetry and prose, the memories of her lost home show no trace of bitterness. They are vivified in the poetic creation of characters and fateful situations, all of which glow with a warm and intimate love of nature.

Nonfiction. Memoirs, essays, and a reference work on German literature head the list of outstanding books of nonfiction published in 1965.

Former chancellor Konrad Adenauer's memoirs were serialized in German newspapers during the year and appeared in book form in October.

A second edition of Albert Schweitzer's *Die Weltanschauung der indischen Denker: Mystik und Ethik* appeared in 1965, the year of the author's death. In this book Schweitzer tries to make intelligible to the West the great personalities of Indian thought, the problems that engaged them, and the ideas they represent—especially the basic negation of life that seems so strange to the occidental mind. (See SCHWEITZER, ALBERT.)

In *Goethe und der französische Geist,* subtitled *Versuch einer Synthese,* Albert Fuchs attempts to demonstrate in the most favorable light Goethe's relationship to France and its culture. The attempt is driven to extremes, however. Suspicious of every form of blatant nationalism, Goethe could hardly have been sympathetic towards the rampant chauvinism of the Napoleonic period. Nevertheless, Fuchs' study contains many valuable insights.

Handbuch der deutschen Gegenwartsliteratur, edited by Hermann Kunisch, is a useful reference book of contemporary German literature. The work of all writers between 1910 and the present is discussed in 470 alphabetically arranged monographs with complete bibliographies. Also included are articles on style, on historical phenomena, and on new literary tendencies.

RANDOLPH J. KLAWITER
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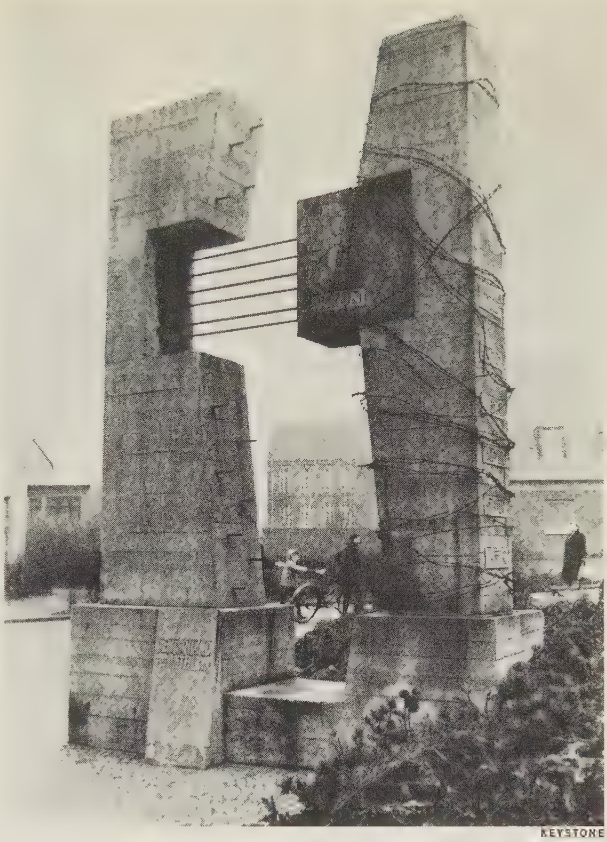
GERMANY



A DIVIDED GERMANY, split between democracy and communism, is symbolized by this modernistic monument in the West German city of Recklinghausen. The column at right, wrapped in barbed wire, represents East Germany, with the divided city of Berlin linked with the West.

KEYSTONE

GERMANY

Germany is divided politically into West Germany (Federal Republic of Germany) and Communist East Germany (German Democratic Republic). The city of Berlin is also divided, but the Western powers and the Soviet Union retain in both West and East Berlin rights based on the 1945 German-Allied agreement on the occupation of Germany.

WEST GERMANY

(FEDERAL REPUBLIC OF GERMANY)

Debate on whether to continue the prosecution of wartime criminals for a few more years, and the

WEST GERMANY · Information Highlights

EUROPE
ASIA
AFRICA

Area: 95,928 square miles.
Population: 58,587,000 (Dec. 31, 1964 est.).
Chief Cities (1964 est.): Bonn, the capital, 214,500; West Berlin, 2,192,700; Hamburg, 1,856,500; Munich, 1,182,400.
Government: *President*—Heinrich Lübke (elected July 1, 1959; reelected July 1, 1964); *Chancellor*—Ludwig Erhard (elected Oct. 16, 1963; reelected Oct. 19, 1965). *Parliament*—Upper House (Bundesrat), 45 members; Lower House (Bundestag), 498 members; party seating (1965)—Bundestag: Christian Democratic Union and the Christian Social Union (CDU-CSU), 247; Social Democratic party (SPD), 202; Free Democratic party (FPD), 49.
Religious Faiths: Evangelical Church, 51% of population; Roman Catholics, 44%; others, 5%.
Education: *Literacy rate*—99% of population. *Total school enrollment* (1963)—8,637,037 (primary, 5,115,048; intermediate, 457,540; secondary, 794,217; teacher-training, 44,963; vocational, 2,036,135; university, 189,134).
Finance (1963): *Revenues,* $21,600,000,000; *expenditures,* $21,100,000,000; *public debt,* $8,300,000,000; *monetary unit,* Deutsche Mark (4 DM equal U.S.$1).
Gross National Product (1964): $103,425,000,000.
National Income (1964): $78,825,000,000; average annual income per person, $1,352.
Economic Indexes (1964): *Industrial production,* 149 (1958=100); *agricultural production,* 127 (1956–57=100); *cost of living,* 114 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 37,339,000; cement, 24,789,000; gasoline (1963), 8,176,000; wheat flour, 3,444,000; meat, 3,007,200; sugar, 2,140,000; plastics and resins, 1,744,800; wine, 661,000.
Crops (metric tons, 1964): Potatoes, 20,624,000 (ranks 3rd among world producers); sugar beets, 13,000,000 (world rank, 4th); wheat, 5,202,000 (world rank, 10th); barley, 3,915,000 (world rank, 6th); rye, 3,609,000 (world rank, 3rd); oats, 2,308,000 (world rank, 4th); grapes, 920,000; apples, 1,216,000.
Minerals (metric tons, 1964): Coal, 255,879,000 (ranks 5th among world producers); iron ore, 11,614,000 (world rank, 11th); salt, 5,796,000 (world rank, 5th); zinc, 95,823 (world rank, 12th); lead, 48,921 (world rank, 15th); gypsum, 1,155,000 (world rank, 10th); barite, 442,599 (world rank, 2nd); silver, 1,990,935 troy ounces (world rank, 16th); crude petroleum, 55,419,000 barrels (world rank, 20th).
Foreign Trade (1964): *Exports,* $16,221,000,000 (chief exports, 1963: nonelectrical machinery, $3,299,000,000; motor vehicles, $1,910,000,000; electrical machinery, $1,173,200,000; iron and steel, $1,145,700,000); *imports,* $14,618,000,000 (chief imports, 1963: fruits and vegetables, $868,900,000; nonelectrical machinery, $835,900,000; textile yarn, fabrics, $768,100,000). *Chief trading partners* (1963): U.S. (took 7% of exports, supplied 15% of imports); France (took 11% of exports, supplied 11% of imports); The Netherlands (took 10% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 234,878 miles (135,459 paved); *motor vehicles* (1964), 10,358,942 (automobiles, 8,274,163); *railways* (1963), 22,160 miles; *merchant vessels* (1964), 840 (4,789,000 gross registered tons); *national airline,* Lufthansa; *principal airports,* Berlin, Düsseldorf, Frankfurt, Hamburg, Munich.
Communications: *Telephones* (1964): 7,599,571; *television stations* (1964), 109; *television sets* (1964), 10,000,000; *radios* (1963), 17,099,000; *newspapers* (incl. regional editions, 1963), 1,128 (daily circulation, 18,175,000).

PICTORIAL PARADE

UPI

PICTORIAL PARADE

WEST GERMAN ELECTIONS on Sept. 19, 1965, brought nation's three leading politicians together in lively campaign. Former Chancellor Konrad Adenauer (*center*), chairman of the Christian Democratic Union, speaks for Chancellor Ludwig Erhard (*left*), who defeated Willy Brandt (*right*), Socialist mayor of West Berlin.

election of a new government again headed by Chancellor Ludwig Erhard loomed larger in the events of 1965 than West Germany's foreign relations. The country's economic growth exceeded the impressive record of the immediately preceding years.

Prosecution of Nazi Criminals. West Germany announced on Nov. 11, 1964, that the prosecution of Nazi criminals had been carried out as far as possible. The government indicated that it did not intend to extend the Statute of Limitations, which restricted indictments for crimes, including murder, to a 20-year period after the alleged crimes had been committed. The government held that it would be contrary to the principles of lawful government to change such a statute arbitrarily; therefore no indictments were to be made after May 8, 1965.

WILLY BRANDT, the Socialist mayor of West Berlin, attempted unsuccessfully in 1965 to win election as chancellor of West Germany. After his Social Democratic party lost the elections of September 19 to incumbent Chancellor Ludwig Erhard's Christian Democratic Union, Brandt announced that he would not run again for chancellor in 1969.

Brandt was born as Herbert Frahm in Lübeck, Germany, on Dec. 18, 1913. He began contributing to a Socialist newspaper when he was 17 and continued to work as a journalist, using the name Willy Brandt, after he fled to Norway in 1933 to escape arrest by the Nazis. When the Nazis invaded Norway in 1940, Brandt went to Sweden and took Norwegian citizenship. He returned to Germany as a news correspondent in 1945 and resumed his German citizenship in 1948. Again active in the Social Democratic party, he was elected to the federal parliament in 1949 and to the post of mayor of West Berlin in 1957. He ran unsuccessfully for chancellor against Konrad Adenauer in 1961.

A great deal of criticism, from both inside and outside Germany, was leveled against this decision. Jewish organizations in the United States demonstrated in front of German diplomatic missions, and the press in the United States and in other countries severely criticized the German proposal.

It was debated in the Bundestag on Dec. 9, 1964. A joint motion of the Christian Democrats and the Social Democrats, which was approved by a large majority, urged the government to ask the public for further evidence regarding Nazi crimes. In carrying out this mandate, the government obtained some new evidence, particularly from Poland.

The Bundestag debated the matter again in a session that impressed observers by the seriousness and weight of the members' arguments. A bill was introduced under which the Statute of Limitations would be extended 10 years beyond the May 8, 1965, expiration date. But it seemed doubtful that the bill, which would have required a two-thirds majority, could be passed. Some opposed it on the ground that 20 years was long enough for Germany and the world to focus on the Nazi period. Others felt that such a bill involved an arbitrary tampering with established law.

The Bundestag finally agreed that the 20-year Statute of Limitation should run from Dec. 31, 1949, the date on which West German courts were completely freed from Allied control. This bill was passed on March 25, 1965, by a vote of 364 to 94. It permits indictments to be made until Dec. 31, 1969. Prosecutions will continue even beyond that date in cases in which indictments have been obtained. Dr. Ewald Bucher, a member of the Free Democratic Party (FDP), resigned as minister of justice since he considered the bill unconstitutional. A Christian Democrat, Dr. Karl Weber, was appointed to replace him on April 1.

Intra-Party Strife. The year 1965 witnessed a great deal of internal feuding within the chief government party, the Christian Democratic Union (CDU), and its Bavarian counterpart, the Christian Social Union (CSU). The principal bone of contention was the handling of Franco-German relations. Former Chancellor Konrad Adenauer, the party chairman of the CDU, and Franz Josef Strauss, the country's former defense minister and the chairman of the CSU, were critical of West Germany's policy toward France under the direction of Chancellor Ludwig Erhard and his foreign minister, Dr. Gerhard Schroeder. They felt it endangered the friendly relations with President de Gaulle that Adenauer had established while he was chancellor. Adenauer and Strauss wished to follow de Gaulle in building a European federation that would be essentially independent of the United States. But the majority of the CDU-CSU, as well as the Free Democratic Party (FDP), the other party represented in the government, and the opposition party, the Social Democratic Party (SPD), wished to see NATO maintained in its present form, the European Common Market (EEC) further integrated, and the Atlantic community strengthened. De Gaulle had not helped his cause in West Germany by his extreme criticism of the European Common Market, of NATO, and of U.S. policies in general.

Elections. West German politics in 1965 were largely dominated by the parliamentary elections that took place on September 19. The party exchanges during the campaign were moderate, although the campaign literature was less restrained. Foreign policy was not a major issue between the two major parties. The reform of public education and the expansion of schools and universities attracted more general attention. But even on these issues the two contending parties were not far apart. The Social Democratic party, which since 1959 has been transforming its Socialist policies into mild reformist ideas, was handicapped by not being able to differentiate clearly its political aims from those pursued by the CDU and CSU. The Social Democrats pinned their hopes for victory on the new set of leaders they were offering the electorate, trusting that the West German people would consider the time ripe for a change after 16 years of CDU-CSU rule. But obviously the West German public, living in prosperity, was willing to overlook the personal shortcomings, the occasional mistakes, and the lack of determination of the Erhard government. (See ERHARD, LUDWIG.)

The victory of the CDU-CSU constituted a great personal triumph for the chancellor, the more so since many of his own party had predicted that the party, though gaining the plurality, would pull fewer votes than in the elections of 1961. Even the federal president, Dr. Heinrich Lübke, had believed that the Social Democrats would run a close second to the CDU-CSU. He apparently was prepared to recommend a coalition government formed by the CDU-CSU and the Social Democrats to replace the CDU-CSU coalition with the Free Democrats. The formation of such a "great coalition" government was supported by all the opponents of Chancellor Erhard, but Erhard opposed it. He garnered for the CDU-CSU a vote larger than that won in 1961 by Dr. Adenauer. On the other hand, the Social Democrats, whose chief standard bearer was the mayor of Berlin, Willy Brandt, were particularly disappointed in not securing so much as 40% of the total vote.

In the September election the CDU-CSU won 47.6% of the vote (compared with 45.3% in 1961), the Social Democrats 39.3% (36.2% in 1961), and the Free Democrats 9.5% (12.8% in 1961). Other parties together polled less than 4%: the German Peace Union (DFU), considered to be a Communist front organization, polled only 1.3%; and the National Democratic Party (NDP), the closest to a German neo-Nazi party, received 2%. Only the CDU-CSU, the Social Democrats, and the Free Democrats won representation in the new Bundestag with 247, 202, and 49 members, respectively.

The new Bundestag held its first meeting on October 19 and elected Dr. Eugen Gerstenmaier as president, an office he had held in former sessions of the Bundestag. Immediately after the election the old feud among the governing Christian Democrats broke into the open again. Adenauer admitted after the election that Erhard, whom he considers to be no statesman, could not be unseated as chancellor. But, together with Franz Josef Strauss, he tried to remove Schroeder as foreign minister, considering him too pro-American and pro-British, as well as anti-French. This attempt failed since Erhard and the party caucus again chose Schroeder for that post. Strauss then tried to get the chairman of the FDP, Dr. Erich Mende, excluded from his former position as minister of all-German affairs. This ministry had been created to give Mende the opportunity to deal with problems of German reunification, which the FDP has made its special domain. The chancellor vacillated for some time since he was four votes short of a majority in the Bundestag, but in the end he retained Mende in his old office. On October 20 the Bundestag elected Erhard chancellor again with a majority of 272 votes to 200, with 15 abstaining. On October 26 he presented to the Bundestag his new cabinet, consisting of 12 CDU, 5 CSU, and 4 FDP ministers.

Nuclear Defense. The build-up of a multilateral nuclear force (MLF), which the U.S. government had proposed and the West German government had accepted in 1964, remained in the discussion stage. When it had become clear that the MLF had met with the strongest French resistance, President Johnson directed the U.S. Department of State in December 1964 not to push the proposal. The United States could not even count on Britain, which preferred a more loosely organized Allied Nuclear Force

VISITING WEST GERMANY in May, Queen Elizabeth II of Britain chats with President and Mrs. Lübke (*left*). (*Right*) The queen and Prince Philip view Berlin wall.

WIDE WORLD

WIDE WORLD

UPI

WEST GERMAN CHANCELLOR Ludwig Erhard (left) meets in Washington, D.C., on Dec. 20, 1965, with President Lyndon Johnson (right). Between them are German Defense Minister von Hassel (left) and Foreign Minister Schroeder.

(ANF) to the MLF. But by the end of 1965, Britain seemed to have dropped its own plan in order to facilitate negotiations with the Soviet Union on nuclear disarmament. The Soviet Union is totally opposed to any plan that might give West Germany a finger on the nuclear trigger. The whole problem will be reconsidered in 1966 when the newly elected West German and French governments have set their foreign policy courses.

Franco-German Relations. Relations with France remained a source of continuous worry throughout the year. There is general agreement in West Germany that relations with France should be friendly, but hardly any West German would deny that close ties with the United States are essential to West German security. The West German government, in addition, wishes to advance closer European integration, which has been blocked by President de Gaulle. The French president wants a loose European federation and the exclusion of U.S. influence from the continent. De Gaulle's position, clearly set forth at his press conference of September 9, is quite contrary to West German policy.

The West German government has emphasized its wish to go on with the integration of the Common Market countries. Similarly, West Germany has indicated that it considers NATO, to which the government has contributed all its own armed forces, of vital importance for West German national safety. The presence of the strong U.S. divisions in West Germany and the American nuclear umbrella are considered an indispensable part of its defense, whereas de Gaulle wishes to unify only Europe's armed forces, to abolish the American command, and to remove the American troops from Europe. On the other hand, he is not prepared to have West Germany participate in the direction of the French nuclear force, which is supposed to become operative in 1968. In these circumstances Franco-German relations remain under a cloud. (See also EUROPE; NORTH ATLANTIC TREATY ORGANIZATION.)

The Arab Countries and Israel. An announcement was made in East Berlin on Jan. 27, 1965, that East Germany's Prime Minister Walter Ulbricht was to pay an official visit to Cairo at the end of February. The West German government reacted with a strong statement that such a state visit would involve far-reaching changes in the relationship between West Germany and the United Arab Republic. The West German ambassador in Cairo, Dr. Georg Federer, was recalled to Bonn to report on a conversation with UAR President Nasser on January 31, in which the ambassador had expressed serious concern at Ulbricht's forthcoming visit to the UAR. West Germany warned that if the UAR recognized East Germany, West Germany would apply the "Hallstein Doctrine." The doctrine, first formulated in 1955, stated that West Germany would not establish diplomatic relations with a country that recognized the East German regime. The only exception made was the Soviet Union.

Nasser indicated that he had invited Ulbricht only after it had been disclosed that Chancellor Adenauer had agreed in 1960 to supply Israel with arms. This agreement called for the delivery by West Germany of $80 million worth of American arms to Israel. These arms were originally given to West Germany by the United States and were being replaced in West Germany by more modern weapons.

West Germany assured the UAR that the delivery of arms to Israel, though 80% completed, would not be continued. He announced that in place of the remaining 20% of the West German-Israel contract, civilian goods or credits would be supplied. On February 15, Israel's Prime Minister Levi Eshkol strongly protested this cancellation of the arms deliveries as being a "surrender" to President Nasser's "blackmail." Ulbricht visited Egypt from February 24 to March 2, and some economic agreements were drawn up involving two East German credits totaling over $100 million.

On March 7 the West German government announced that it desired to place its relations with Israel on a normal basis. It added that this move was not directed against any Arab state. Simultaneously it called Ulbricht's reception in Egypt a "provocation" and announced the cessation of West German economic aid to the UAR. Dr. Kurt Birrenbach, a member of the Foreign Affairs Committee of the Bundestag, arrived in Jerusalem on March 7 as Chancellor Erhard's special emissary for talks with Prime Minister Eshkol and the foreign minister, Mrs. Golda Meier. After he returned to Bonn on March 14, it was announced that the Israeli cabinet had approved in principle the immediate establishment of diplomatic relations with the Federal Republic of Germany. The decision was approved by the Knesset on March 16 by a vote of 66 to 29, with 10 abstentions. Birrenbach visited Jerusalem again between March 17 and 23, and returned on April 6 for final talks.

The establishment of diplomatic relations between the German Federal Republic and Israel came into effect on May 12 with an exchange of letters between Erhard and Eshkol. The two countries agreed that the balance of the shipments would consist of civilian supplies. When payments under the 1952 reparations agreement between West Germany and Israel had been completed, the West German government was to negotiate with Israel about further economic aid. Early in July the Israeli government accepted Dr. Rolf Pauls as the first West German ambassador to Israel. The West German government simultaneously accepted Asher Ben-Nathan as Israel's first ambassador to West Germany.

The Arab reaction to the establishment of diplomatic relations between West Germany and Israel was heated but ultimately indecisive. The foreign ministers of the Arab League states met in Cairo on March 14–15 and agreed on the immediate withdrawal of all Arab ambassadors from Bonn. However, only 10 of the 13 Arab states did so; Morocco, Tunisia, and Libya maintained their relations with West

Germany. There was little support for the breaking off of economic relations with West Germany, and only 6 of the 13 Arab League States—the UAR, Iraq, Yemen, Algeria, Sudan, and Kuwait—were reported to favor the recognition of East Germany. But no such action was taken. The UAR elevated its consulate in East Berlin to consulate general status, but fell short of establishing an embassy. Although 10 West German ambassadors were withdrawn from Arab League states, the West German government declared that the Arab League states would be allowed to maintain consulates in West Germany if they wished. It was also said that the West German government would continue its economic aid to the Arab world and expected to keep open the two West German consulates at Alexandria and Aleppo.

Economic Developments. The West German economy in 1965 continued to expand. In 1964 the national production was 413.4 billion Deutsche marks (DM), or 9.7% higher than in the year before. (In 1963 the growth was only 6.3%.) In the first eight months of 1965 industrial production was 7.2% greater than in the comparable period in 1964. Strong incentives for expansion came to a large extent from the growing consumption sparked by higher incomes, which had risen 10.5% in the first half of 1965. But not all of the income was spent. The German Federal Bank estimated that savings would be a fifth or a quarter greater than the high level of savings in 1964.

The rise in consumption was one of the chief reasons for the substantial growth of imports, which reached 45.3 billion DM. The value of exports reached 46.2 billion DM during the first eight months of 1965. This indicates an increase of 20.7% in imports and 10.1% in exports, compared with 1964. However, since the average prices of imports and exports in the period were 3% higher than in the comparable period in 1964, the volume of trade was not as big as these figures suggest. The volume increase in imports was 19% and in exports 7%. The active balance of trade in the first eight months of 1965 amounted to 0.9 billion DM, compared with 4.7 billion in 1964.

Foreign Capital Investment. As in other European countries, the problem of foreign capital investment in European industries was debated in West Germany. One study revealed that the foreign capital in West Germany is not chiefly American, although the numbers of U.S. firms operating in West Germany rose from 350 in 1957 to 1,100 in 1965. Of these, 400 are producing goods in West Germany. But of the more than 11 billion DM of foreign capital, only 40% is American, while 17% is Dutch, 16% Swiss, 9% British, and 7% French.

Altogether 16% of the capital invested in West German corporations is foreign-owned. Among the various branches of industry, only the oil industry is practically a foreign monopoly, with U.S. companies owning 40%, and the Dutch and British together controlling 50% of the West German industry. About 40% of the food-processing industry is in foreign hands. Of that total, Dutch companies own 40%, the Swiss 25%, and U.S. companies 20%.

In individual industries, however, U.S. products play a large part. In business machinery and electronics the impact is greatest. The U.S. firm International Business Machines in 1964 controlled 76% of the market, followed by the Remington Co. with 9%. Siemens, the second largest of all the West German industrial corporations, was third with a modest 5%. In the first half of 1965 about 40% of all the new automobiles manufactured in West Germany were built by the American-owned firms in West Germany of the Ford Motor Company and Opel (General Motors).

It is not likely that the Federal Republic will follow France and Switzerland in imposing restrictions on foreign investments. West Germany has welcomed foreign capital because it has contributed substantially to the rebuilding and expansion of the West German economy. Moreover, through contact with foreign industries, West Germany has become familiar with modern products and production methods. It is often stated that the American firms in particular have brought much technical progress to West Germany.

Wages, Employment, and Prices. Wages in West Germany have risen between 1953 and 1965 by 100%, or four times as much as in the United States. (However, West German wages were exceedingly low at the beginning of this period.) Wages continued to climb during 1965.

Employment reached a new peak in 1965. At the end of August there were 720,300 jobs open and only 85,700 unemployed (0.4% of the national labor force). About 1,164,000 foreign workers were employed in West Germany, 360,000 of whom were Italians. The next largest groups were Greek, Spanish, and Turkish. The Yugoslavs, Dutch, and Austrians also were well represented.

Prices rose in West Germany in 1965, especially agricultural prices, which increased when abnormally cold and rainy spring and summer delayed the harvest of vegetables and fruits. In July 1965, food prices were 12% higher than in July 1964. The prices for industrial products, however, rose by only 2.1%.

West Berlin. With the help of the West German Republic, West Berlin has continued to be politically strong and economically prosperous. The city has recorded a slight increase in population and has enjoyed a larger production increase, relative to its size, than West Germany.

WEST BERLINERS line up at Checkpoint Charlie on June 6, 1965, to enter East Berlin to visit their relatives.

UPI

EAST GERMANY
(GERMAN DEMOCRATIC REPUBLIC)

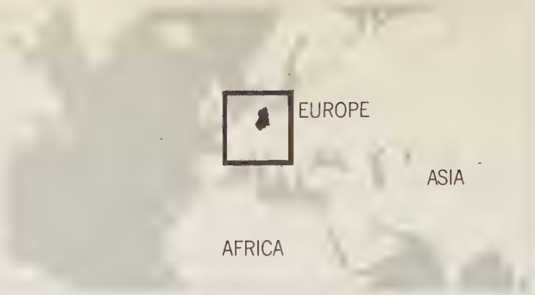
East Germany made impressive gains in industrial production in 1965. But this Soviet puppet state was forced to siphon off some of its wealth to the Soviet Union through trade agreements weighted heavily in favor of the USSR.

Defections to the West. Dissatisfied with the Communist regime, East Germans continued to make daring escapes to the West. Between Aug. 13, 1961, the day the wall between East and West Berlin was built, and July 1, 1965, 61 persons were killed while attempting to escape over the wall, and 56 were killed along the West and East German frontier. Altogether 433 members of the East German armed forces fled to West Berlin.

Elections. For the first time since 1961, elections took place for country, town, and city assemblies. Altogether 245,000 representatives were elected. As in the past, the voter could vote only for a single list composed by the Communist Party (SED) and its affiliated organizations. One change had been introduced in the election system to make it appear more democratic: the voter was allowed to strike out candidates. However, any candidate who received 50% of the general vote was considered elected. The participation in the election was 99.90% of eligible voters, a little less than the 99.97% recorded in 1961. Only two candidates on the party list were not elected.

Economic Developments. In the first six months of 1961 there was a remarkable 6% increase in the gross national product of East Germany. A 7% rise in productivity was recorded in industry. Trade in foodstuffs and luxury goods enjoyed a 3% increase. The rise in productivity resulted from the policies introduced in the fall of 1963, requiring that individual factories be run on a profit basis and that special material incentives for managers and workers be used to fulfill targets set by the economic plan. This seems to have decreased the power of political functionaries in industry and to have raised the status of engineers and technicians.

In the first half of 1965, incomes rose by only 4%, lagging behind the rising productivity, but creating a reserve for further expansion.



EAST GERMANY · Information Highlights

Area: 41,814 square miles.

Population: 17,011,931 (prelim. census, Dec. 31, 1964).

Chief Cities (1964 prelim. census): East Berlin, the capital, 1,071,462; Leipzig, 595,203; Dresden, 503,859; Karl-Marx-Stadt, 293,549.

Government: *Chairman of the Council of State*—Walter Ulbricht; *Minister President*—Willi Stoph. *Parliament*—People's Chamber, 434 members.

Religious Faiths: Protestants, 80% of population; Roman Catholics, 11%; others, 9%.

Education: *Literacy rate*—99% of population. *Total school enrollment* (1963)—2,843,923 (primary, 2,202,496; secondary, 76,544; technical-vocational, 486,478; higher, 78,405).

Finance (1963): *Revenues*, $25,500,000,000; *expenditures*, $25,400,000,000; *monetary unit*, Ostmark (2.22 Ostmarks equal U.S.$1).

Net Material Product (1964): $36,500,000,000.

Economic Indexes: *Industrial production* (1964), 149 (1958=100); *cost of living* (1963), 98 (1958=100).

Manufacturing (metric tons, 1964): Cement, 5,771,000; crude steel, 3,852,000; gasoline (1963), 1,316,000; sugar, 856,000; butter, 172,800; cotton yarn, 61,000; aluminum, 45,000.

Crops (metric tons, 1964): Potatoes, 12,020,000 (ranks 4th among world producers); sugarbeets (1963), 6,176,000 (world rank, 8th); rye, 1,575,000 (world rank, 4th); barley, 1,406,000 (world rank, 12th); oats (1963), 728,000 (world rank, 12th); wheat (1963), 1,280,000.

Minerals (metric tons, 1964): Salt, 2,000,000 (ranks 11th among world producers); gypsum, 258,000 (world rank, 20th); coal (1963), 2,483,000; copper, 28,000 (world rank, 18th); tin, 732 (world rank, 16th); nickel, 100 (world rank, 14th); silver, 4,800,000 troy ounces (world rank, 10th).

Foreign Trade (1963): *Exports*, $2,673,000,000 (chief exports: machinery, vehicles, lignite briquettes); *imports*, $2,287,000,000 (chief imports: coal, lignite, coke). *Chief trading partners:* USSR (took 47% of exports, supplied 50% of imports); Czechoslovakia (took 8% of exports, supplied 9% of imports); West Germany (took 9% of exports, supplied 8% of imports).

Transportation: *Classified Roads* (1963), 28,300 miles; *motor vehicles* (1963), 366,700 (automobiles, 185,000); *railways* (1963), 10,040 miles; *merchant vessels* (1964), 76 (480,000 gross registered tons); *airline*, served by Interflug; *principal airport*, East Berlin.

Communications: *Telephones* (1964), 1,515,271; *television stations* (1964), 15; *television sets* (1964), 2,580,000; *radios* (1962), 5,670,000; *newspapers* (1963), 34.

EAST GERMAN PRESIDENT Walter Ulbricht (left) arrives in Cairo on Feb. 24, 1965, for meetings with UAR President Gamal Abdel Nasser (right). Their talks led to a break in diplomatic relations between UAR and West Germany.

WIDE WORLD

Trends in foreign trade were less favorable in the first half of 1965. Only a 4% increase was achieved. The greater variety of goods produced in East Germany was primarily the result of the boosted investment in the production of capital goods, which surpassed the previous year's level by 8%. Plant building was most pronounced in the power industry and in the chemical industry. Private consumption rose by only 4%, but a demand for a greater range of goods was fulfilled. Clothing was more easily obtainable, although some gaps in supplies still existed. Restrictions were lifted on meat sales, but butter continues to be rationed. Trade between East and West Germany in 1964 reached its highest level, with exports from the East reaching a value of 1,110 million DM, and those from the West totaling 1,190 million DM.

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GERONTOLOGY. See OLD AGE.

GUINEA
GHANA

WIDE WORLD

GHANA'S PRESIDENT NKRUMAH (r.) was host to meeting of the Organization of African Unity, in Accra, October 21. Nkrumah (shown with President Sekou Touré of Guinea) urged Britain to use troops to prevent Rhodesia's independence, and warned of the consequences of independence.

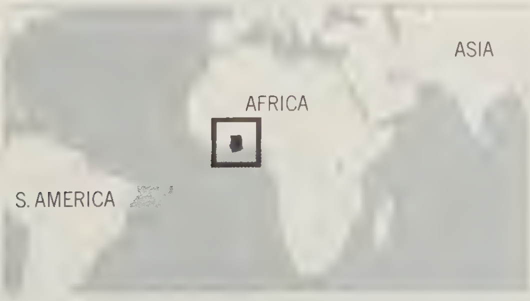
GHANA

The ministry of local government in Ghana announced on June 3 that the general elections for the National Assembly scheduled for June 9 would not be held, since all 198 candidates nominated by the Convention People's Party (CPP), the only party permitted in Ghana, were unopposed. After the National Assembly met on June 10, it unanimously elected Kwame Nkrumah to his second five-year term as president. President Nkrumah immediately announced his new cabinet, which included the appointment as foreign minister of Alex Quaison-Sackey, formerly ambassador to the United Nations and president of the UN General Assembly during its 19th session.

Domestic Affairs. President Nkrumah had solidified his power earlier. On February 1 the post of executive secretary of the CPP was abolished and the administration of the national headquarters became Nkrumah's direct responsibility because of his position as the party's general secretary.

On February 8, at their second trial, five men accused of treason in connection with an attempt in August 1962 to assassinate President Nkrumah were sentenced to death. At their first trial, in December 1963, three of them were acquitted—former ministers Tawia Adamafio and Ako Adjei and the former executive secretary of the CPP, Hugh Cofie-Crabbe. The presiding judge at the first trial Chief Justice Sir Arku Korsah, was dismissed by Nkrumah, and the verdict was annulled under a

GHANA · Information Highlights



Area: 92,099 square miles.
Population: 7,600,000 (mid-1964 est.).
Chief Cities (1960 census): Accra, the capital, 337,828; Kumasi, 180,642; Cape Coast, 41,230; Takoradi, 40,937.
Government: *President—Prime Minister*—Kwame Nkrumah (took office July 1, 1960). *Parliament*—National Assembly, 198 members (all belonging to the Convention People's party).
Religious Faiths: Tribal religions, 62% of population; Christians, 24%; Muslims, 14%.
Gross National Product (1964): $1,895,400,000.
Education: *Total school enrollment* (1962–63)—1,027,529 (primary, 993,000; secondary, 23,000; teacher-training, 6,500; technical, 3,000; university, 2,029).
Finance (1964 est.): *Revenues,* $335,000,000; *expenditures,* $405,000,000; *net public debt* (1963), $580,000,000; *monetary unit,* cedi (0.8571 cedi equals U.S.$1).
Economic Indexes (1964): *Industrial mining production,* 92 (1958=100); *cost of living,* 141 (1958=100).
Crops (metric tons): Cocoa beans (1964–65), 570,000 (ranks 1st among world producers); cassava (1962–63), 788,000; maize (1963–64), 183,000; peanuts (1963–64), 61,000; rice (1964–65), 36,000.
Minerals (metric tons, 1964): Manganese (exports), 495,030 (ranks 7th among world producers); bauxite (exports), 268,000 (rank, 18th); gold, 864,917 troy ounces (rank, 6th); gem diamonds, 267,000 carats (rank, 8th); salt, 31,000; silver (1963 exports), 4,827 troy ounces.
Foreign Trade (1964): *Exports,* $292,000,000 (chief exports: cacao, $191,300,000; wood, $41,500,000; diamonds, $17,200,000; manganese, $12,200,000); *imports,* $340,000,000; (chief imports, 1963: nonelectrical machinery, $57,300,000; motor vehicles, $23,900,000; printed cotton fabrics, $21,100,000). *Chief trading partners* (1963): Britain (took 20% of exports, supplied 33% of imports); U.S. (took 18% of exports, supplied 6% of imports); West Germany (took 11% of exports, supplied 10% of imports); the Netherlands (took 11% of exports, supplied 7% of imports); Italy (took 8% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 20,629 miles (2,183 paved); *motor vehicles* (1964), 47,683 (automobiles, 27,424); *railways* (1963), 589 miles; *merchant vessels* (1964), 14 (90,000 gross registered tons); *national airline,* Ghana Airways; *principal airports,* Accra, Kumasi, Takoradi, and Tamale.
Communications: *Telephones* (1964): 30,741; *television stations* (1964), 3; *radios* (1963), 505,000; *newspapers* (1962), 3 (daily circulation, 201,000).

retroactive bill giving the president power to reverse special court decisions in the interest of national security.

On February 4, Joseph B. Danquah, veteran nationalist leader and Nkrumah's opponent in the 1960 presidential elections, died in a Ghanaian detention camp.

Censorship was tightened in February when a committee was established to inspect publications in bookshops and libraries to ensure the removal of all writings not reflecting the ideology of the CPP. The press and radio had already been under censorship control.

Economy. Ghana's 1965 budget proved to be a surprise in view of the country's poor financial situation. It was expected that an attempt would be made to retrench in line with the seven-year development plan's emphasis on (1) full utilization of existing capacity to expand production and (2) the completion of projects already begun before starting new ones. Instead, the budget presented an accelerated development program without pruning current government expenditures.

On September 1 the $200 million hydroelectric project at Akosombo on the Volta River went into operation. The largest single consumer of its power will be the $280 million aluminum smelter to be completed jointly in 1967 by Kaiser Aluminum and the Reynolds Metals Company. In January, work started on an $840,000 gold refinery at Tarkwa, a $2.8 million fishing industry enterprise at Tema, and a $16.5 million sugar refinery at Komenda.

Because of the sharp drop in cocoa prices during 1965, the support price paid by the Cocoa Marketing Board to farmers was decreased from $8.40 to $5.60 per 60 pounds.

On June 23 a new Industrial Relations Act was approved. It apparently was motivated by the government's desire to avoid foreign criticism of official trade unions in Ghana. On July 1 a new Social Security Act went into effect, empowering employers to deduct 7.5% from employees' salaries, with employers contributing 15% of the employees' salaries to the State Insurance Corporation.

On July 19, Ghana changed to a decimal currency system. The new units are the cedi and pesewa; one cedi equals 100 pesewas, or about U.S.$1.17.

Foreign Affairs. Communist China increased its goodwill activities and technical assistance in Ghana during 1965. On May 20, China and Ghana signed a scientific cooperation agreement.

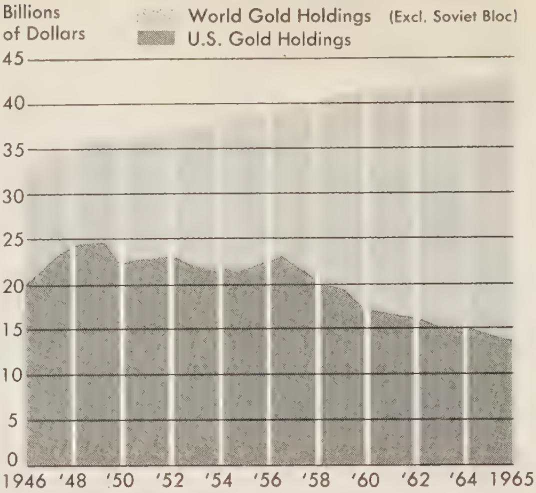
The fourth Afro-Asian People's Solidarity Conference took place at Winneba from May 9 to 16. Its delegates criticized United States policies, and its resolutions, reflecting the Communist line on world issues, concerned nonintervention by "imperialist" powers in the affairs of independent states.

The third annual conference of the Organization of African Unity took place in Accra from October 21 to 26. The conference warned Britain of the possible consequences if Rhodesia's white minority government declared its independence. British Prime Minister Harold Wilson visited President Nkrumah on October 31 and conferred with him on the Rhodesia issue. (See also Africa.)

Peter Kolar
Office of Central African Affairs
U.S. Agency for International Development

GIBRALTAR. See Commonwealth of Nations.

UNITED STATES AND WORLD GOLD HOLDINGS



GOLD

World production of gold in 1964 increased for the 11th consecutive year, according to the U.S. Bureau of Mines. It amounted to 46.1 million fine (troy) ounces, valued at $1.61 billion. (Revised estimates for USSR in several past years have reduced world totals.) The increase of 1.9 million ounces was derived almost entirely from the continued expansion of South African mines, which contributed 29,136,542 ounces, or about 63.2% of estimated world gold production. Colombia and Rhodesia also registered gains. (See also Mining.)

U.S. MINE PRODUCTION OF RECOVERABLE GOLD
(In troy ounces)

	1961	1962	1963	1964
Alaska	114,216	165,259	99,573	58,416
Arizona	145,959	137,207	140,030	153,676
California	97,644	106,272	86,867	71,028
Colorado	67,515	48,882	33,605	42,122
Idaho	5,718	5,845	5,477	5,677
Montana	35,377	24,387	18,520	29,115
Nevada	54,165	62,863	98,879	90,469
New Mexico	6,201	7,529	7,805	6,110
North Carolina	2,094	460	33	...
Oregon	1,054	822	1,809	661
Pennsylvania	...[1]	...[1]	...[1]	...[1]
South Dakota	557,855	577,232	576,726	616,913
Tennessee	152	158	137	133
Utah	342,988	311,924	285,907	287,674
Washington	117,331	93,671	98,638	94,308
Wyoming	1	...	4	6
Total output	1,548,270	1,542,511	1,454,010	1,456,308
Total value	$54,189,000	$53,990,000	$50,887,000	$50,970,780

[1] Included with Washington. (Source: U.S. Bureau of Mines.)

United States refinery production of gold in 1964 rose to 1,469,000 ounces—a small increase over the 1,468,750 ounces refined in 1963. The amount of gold received from placer mining continued to decrease in Alaska and California, but was offset by an increase in gold recovered as a mining byproduct of copper, lead, and zinc ores in South Dakota, Arizona, Montana, and Utah.

In the first nine months of 1965, the gold mined in the United States totaled about 1,233,185 ounces, compared with 1,059,935 ounces in the same period in 1964. U.S. exports of refined gold bullion in 1964 more than doubled, to reach 12 million ounces, valued at $422 million. Most of the gold exported went to France.

Berenice B. Mitchell
Supervisory Statistical Officer, Division of International Activities, U.S. Bureau of Mines

GOLDBERG, Arthur Joseph

U.S. ambassador to the United Nations: b. Chicago, Ill., Aug. 8, 1908.

Arthur Goldberg received, in 1965, his third major appointment in five years. The new U.S. ambassador to the United Nations had served as secretary of labor and as an associate justice of the U.S. Supreme Court.

Named Ambassador. After the death of Ambassador Adlai Stevenson on July 14, 1965, President Johnson sought a successor whose appointment would reflect the importance of the United Nations. Because he wanted a man adept at dealing with people, he chose Goldberg, who gave up his lifetime tenure on the Supreme Court to accept the post.

In accepting on July 20, Goldberg said that he was deeply committed to "the effort to bring the rule of law to govern the relations between sovereign states. . . . It is that or doom—and we all know it. I have accepted, as one simply must." The Senate unanimously confirmed the appointment on July 23, and Goldberg was sworn in on July 26.

United Nations Developments. Goldberg announced on August 16 that the United States was dropping its demand that 13 countries pay the arrears on their peace-keeping assessments or lose their votes in the General Assembly, as provided in Article 19 of the UN Charter. Their refusal to pay had paralyzed an Assembly that was reluctant to force a showdown by taking any vote for the record. Goldberg's move eased tensions at the United Nations, but some congressmen criticized the alleged "surrender."

In September, Goldberg worked relentlessly behind the scenes to win Security Council support for resolutions urging that India and Pakistan stop fighting in Kashmir. Their agreement to a cease-fire was a major victory for the United Nations.

Goldberg assured his fellow delegates that the United States was eager to work within the framework of the United Nations for an end to the war in Vietnam. At the end of 1965, he and several other administration officials traveled to foreign capitals to explain the U.S. wish for an early, honorable settlement. Goldberg conferred with Pope Paul, President Giuseppe Saragat of Italy, President Charles de Gaulle of France, and Prime Minister Harold Wilson of Great Britain. (See also UNITED NATIONS.)

Supreme Court. Goldberg resigned from the court on July 26, 1965. His appointment by President Kennedy in 1962 had reversed a previous 5–4 edge held by the advocates of judicial restraint. Justice Goldberg was prepared to override any law or previous ruling that in his view infringed on the constitutional rights of an individual.

On June 7, 1965, Goldberg wrote a separate concurring opinion that held that an anti-birth-control law was unconstitutional. He asserted that "the right of privacy in the marital relation is fundamental and basic—a personal right" guaranteed to the people under the Constitution.

Background. Goldberg, the son of Russian Jewish immigrants, received law degrees from Northwestern University in 1929 and 1930. During World War II he served in the Office of Strategic Services. In 1955 he helped secure a merger of the American Federation of Labor and the Congress of Industrial Organizations, and he then became special counsel for the AFL-CIO. While secretary of labor in 1961 and 1962, he mediated several important labor disputes.

U.S. AMBASSADOR ARTHUR GOLDBERG presents his credentials to U.N. Secretary-General U Thant on July 28.

WIDE WORLD

GOLF. See SPORTS.

GOVERNMENT DEPARTMENTS AND AGENCIES. See UNITED STATES; and articles on the major government agencies and bureaus.

GRAINS

United States production of the four major livestock feed grains increased to a record level in 1965—17% above 1964 and 3% above the previous high in 1963. The output of these grains—corn, oats, barley, and sorghum—rose to 160,674,000 tons, as compared with the 137,870,000 tons harvested in 1964. The nation's feed grain supply included 55,300,000 tons carried over from preceding years. The carry-over ran 13,900,000 tons less than in 1964, and 29,400,000 tons below the record set in 1961.

Feed Grains. The increase in the 1965 feed grain crop resulted from a record yield per acre for each crop—1.62 tons per acre, or 18% more than in 1964 and 25% above the 1959–63 average. However, in spite of the decreased acreage, production increased 2% for barley, 9% for oats, and 16% for corn. Sorghum rose 35%. Feed grain acreage harvested was 1% less than in 1964. To obtain government payments, farmers diverted 36,700,000 acres of feed grains to soil conservation uses.

The use of feed grains increased steadily from 1957 to a peak of 154,000,000 bushels in 1962. Use declined the following two years, but in 1965 reached a new record of 156,700,000 bushels.

The national average price support per bushel of corn, barley, and oats produced in 1965 were, respectively, $1.25, 96 cents, and 60 cents. The rate for sorghum grain was $2.00 per hundredweight (cwt). Under the Food and Agriculture Act of 1965, passed by Congress on November 4, the voluntary price-support and acreage-diversion programs in effect since 1961 were continued through 1969. Beginning in 1966, however, the basis for figuring price supports, cropland-adjustment payments, and compensation for land diverted to other uses will be projected yields instead of base-period yields.

Food Grains. Production of wheat, rye, and rice for human consumption increased 3% in the United States in 1965. Total production reached 44,581,000

WORLD PRODUCTION OF GRAINS BY LEADING COUNTRIES

(In bushels)

	Average 1955–59	1964	1965[1]
Wheat:			
USSR	1,910,000,000	2,100,000,000	. . .
United States	1,095,357,000	1,290,468,000	1,357,777,000
Canada	465,618,000	600,424,000	759,804,000
France	357,997,000	508,446,000	532,800,000
India	329,930,000	362,300,000	443,800,000
Italy	330,330,000	315,342,000	349,100,000
Turkey	227,890,000	257,000,000	275,000,000
Argentina	225,949,000	371,100,000	. . .
Australia	168,217,000	370,000,000	. . .
Pakistan	136,034,000	153,740,000	165,000,000
Germany, West	138,677,000	190,500,000	158,770,000
Spain	165,400,000	145,720,000	152,960,000
United Kingdom	101,718,000	135,855,000	151,600,000
Yugoslavia	102,000,000	135,950,000	128,600,000
Rye:			
USSR	635,000,000	500,000,000	. . .
Poland	285,280,000	272,000,000	. . .
Germany, West	147,130,000	142,070,000	111,840,000
Germany, East	81,152,000	62,000,000	. . .
Czechoslovakia	38,140,000	32,870,000	. . .
Argentina	31,816,000	25,648,000	. . .
United States	27,030,000	33,472,000	32,765,000
Turkey	24,023,000	26,600,000	27,600,000
Spain	20,056,000	13,779,000	13,385,000
Austria	16,254,000	15,270,000	13,300,000
Corn:			
United States	3,234,891,000	3,548,604,000	4,128,257,000
China, Communist	435,000,000	. . .	. . .
USSR	296,700,000	360,000,000	. . .
Brazil	299,000,000	484,690,000	. . .
Mexico	190,630,000	267,700,000	275,600,000
Yugoslavia	185,420,000	274,000,000	232,000,000
Rumania	200,660,000	263,300,000	. . .
Argentina	173,710,000	202,400,000	. . .
South Africa	157,540,000	169,730,000	. . .
Italy	139,280,000	154,670,000	151,570,000
Oats:			
United States	1,278,145,000	881,891,000	994,167,000
USSR	845,000,000	295,000,000	. . .
Canada	374,764,000	357,178,000	421,421,000
France	224,270,000	159,150,000	165,690,000
Poland	168,650,000	154,000,000	. . .
Germany, West	156,630,000	159,000,000	140,940,000
United Kingdom	163,310,000	92,750,000	86,660,000
Germany, East	72,338,000	50,180,000	. . .
Sweden	58,750,000	99,760,000	79,920,000
Finland	48,160,000	51,120,000	58,910,000
Barley:			
USSR	440,000,000	1,090,000,000	. . .
United States	424,448,000	403,072,000	407,679,000
China, Communist	311,000,000	. . .	. . .
United Kingdom	148,200,000	345,520,000	364,560,000
France	197,890,000	311,910,000	335,000,000
Canada	237,926,000	166,816,000	219,710,000
Denmark	110,090,000	180,410,000	172,240,000
Germany, West	111,700,000	179,830,000	150,970,000
Turkey	139,000,000	128,600,000	142,380,000
India	124,600,000	93,580,000	113,820,000
Rice:[2]	(metric tons)	(metric tons)	(metric tons)
India	43,434,500	58,156,600	54,000,000
Pakistan	12,827,800	17,795,900	. . .
Japan	14,810,500	15,731,200	15,710,000
Indonesia	12,094,000	14,000,000	13,500,000
Thailand	7,004,700	9,625,000	10,000,000
Burma	6,985,000	8,100,000	8,200,000
Brazil	4,057,300	6,300,000	. . .
Philippines	3,499,300	4,001,800	4,050,000
Korea, South	3,028,700	3,978,600	3,880,000
Taiwan	2,423,800	2,990,000	. . .
United States	2,238,100	3,316,400	3,449,300
Cambodia	2,200,000	2,643,000	2,700,000

[1] Preliminary estimates for Northern Hemisphere countries; for Southern Hemisphere countries, preliminary forecasts based largely on acreage and weather conditions. Years shown refer to harvests in Northern Hemisphere. Harvests in Southern Hemisphere come early in following year. [2] Excluding Communist areas. (Source: Foreign Agricultural Service, U.S. Department of Agriculture.)

tons, up from 43,330,000 tons in 1964 and 38,611,000 in 1963. Production of winter wheat, the major food grain, reached about the same amount as the 30,746,640 tons grown in 1964.

Wheat. The Food and Agriculture Act of 1965 extended the voluntary wheat acreage reduction and marketing-certificate program through 1969. Using a combination of price supports, direct payments, land-diversion payments, and marketing certificates, the farmer was guaranteed a minimum average price of $1.84 per bushel for wheat, plus other compensation, to raise the price to 100% of parity. (In November, parity was $2.57 per bushel.)

The U.S. crop of 1,326,747,000 bushels of wheat in 1965 exceeded that of 1964 by 3%, and the 1959–63 average by 12%. Farmers planted 56,942,000 acres in wheat—1,877,000 more than in 1964—and harvested 49,313,000 acres. Yield per acre in 1965 averaged 26.9 bushels—the second highest yield on record. The world crop estimate was 9,108,000,000 bushels.

Rye. The U.S. rye crop of 33,277,000 bushels in 1965 was slightly less than the 1964 crop, and 11% below the 1959–63 average. Acres harvested for grain totaled 1,466,000, down 14% from the previous year. The yield per acre was 22.7 bushels, or 3.2 bushels greater than the 1964 figure. The 1965 world crop totaled 1,270,000,000 bushels.

Rice. Production of rice in the United States in 1965 set a record for the fourth consecutive year. The rough rice crop totaled 76,932,000 bags (of 100 pounds each), or 5% above the previous year's record of 73,113,000 bags, and well above the 5-year average. Yields averaged a record 4,291 pounds per acre—195 pounds more than in 1964. The acreage harvested rose slightly from 1,786,000 in 1964 to 1,793,000 in 1965. The 1965–66 world crop was estimated at 164,100,000 metric tons.

Corn. Production of corn for grain in the United States in 1965 totaled a record 4,171,100,000 bushels. The average yield of 73.1 bushels per acre, also a record, was up sharply from the 62.1 bushels in 1964. The world corn crop in 1965–66—an all-time record—was estimated at 8,150,000,000 bushels.

Oats. The 1965 U.S. oat crop averaged 50.2 bushels per acre, 5.0 bushels above the previous record yield in 1963. It totaled 959,192,000 bushels —up 9% from 1964, but 8% below the 1959–63 average. World production of oats in 1965 rose to 3,075,000,000 bushels—an immense gain over the 50-year low of 881,891,000 bushels harvested in 1964.

Barley. The 1965 barley crop in the United States rose 2% from the 1964 figure, to 411,897,000 bushels, or 2% below the 1959–63 average. Yield per acre attained a record high of 43.5 bushels. World production was 4,080,000,000 bushels—down from the 4,260,000,000-bushel record of a year earlier.

Sorghum Grain. U.S. sorghum grain production in 1965 totaled 666,062,000 bushels—up 35% from 1964, and 21% above the 1959–63 average. The average yield per acre of 50.0 bushels established a new high by exceeding the 1962 record of 44.2. Acreage harvested for grain rose 11% above 1964, to 13,323,000 acres, but was 1% less than the 1959–63 average. (See also AGRICULTURE.)

WILLIAM WHYTE
Office of Information
U.S. Department of Agriculture

GRAPHIC ARTS. See BOOK PUBLISHING; MAGAZINES; NEWSPAPERS.

GRAU, Shirley Ann. See biographical sketch under AMERICAN LITERATURE.

GREAT BRITAIN

CAMERA PRESS

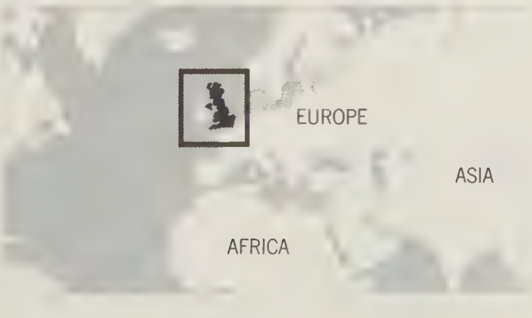
BRITAIN'S QUEEN ELIZABETH II, visiting Ethiopia with the Duke of Edinburgh (right) in February, is shown Tississar Falls by Emperor Haile Selassie.

GREAT BRITAIN

The British Labour government in 1965 was able to put its policies into effect despite its small majority in the House of Commons, which varied during the year from two to three. An economic crisis dominated the scene, but government measures taken throughout the year gave the prospect of solution to the crisis in 1966. But there was no easy solution to the Rhodesian problem.

The Economy. The government directed a major effort toward the expansion of British exports. On January 19 it announced details of a tax rebate scheme for exporters; it broadened credit guarantees for exporters on January 27 and again on August 2; and on February 1 it established export councils for the principal world trading areas. The government announced exchange control restrictions in the budget of April 6, and further restrictions on July 27, when it also announced that Britain's overseas aid

GREAT BRITAIN · Information Highlights



Area: 93,605 square miles.

Population: 54,066,000 (June 30, 1964 est.).

Chief Cities (June 30, 1964 est.): London, the capital, 8,184,600; Birmingham, 1,106,040; Glasgow (1963 est.), 1,036,321; Liverpool, 729,140; Manchester, 644,500; Leeds, 508,790; Sheffield, 490,930.

Government: *Queen*—Elizabeth II; *Prime Minister*—Harold Wilson. *Parliament*—House of Commons, 630 members; party seating (Dec. 15, 1965)—Labour, 315; Conservative, 304; Liberal, 10; Vacancy, 1; House of Lords, 975 members.

Religious Faiths: Anglicans, 55% of population; Roman Catholics, 9%; Presbyterians, 3%; Methodists, 1.8%; Jews, 1%.

Education: *Total school enrollment* (1963–64)—11,942,702; (primary and secondary, 8,817,409; technical, 2,979,369; university, 145,924).

Finance (1964–65): *Revenues,* $21,053,000,000; *expenditures,* $19,947,000,000; *public debt* (1963), $80,774,000,000; *monetary unit,* pound (.3571 pound equals U.S.$1).

Gross National Product (1964): $91,274,000,000.

National Income (1964): $73,444,000,000; average annual income per person, $1,358.

Economic Indexes (1964): *Industrial production,* 128 (1958=100); *agricultural production,* 132 (1956–57=100); *cost of living,* 115 (1958=100).

Manufacturing (metric tons, 1964): Crude steel, 26,234,000; cement, 16,968,000; gasoline (1963), 7,756,000; wheat flour, 3,648,000; sulfuric acid, 3,180,000; meat, 1,976,400; sugar, 1,025,000.

Crops (metric tons, 1964): Barley, 7,552,000 (ranks 3rd among world producers); potatoes, 7,064,000 (world rank, 7th); sugar beets, 6,318,000 (world rank, 8th); wheat, 3,697,000 (world rank, 15th); oats, 1,363,000 (world rank, 8th); wool (1963), 56,200 (world rank, 8th); dessert apples, 624,000; rye, 25,000.

Minerals (metric tons, 1964): Iron ore, 16,948,000 (ranks 8th among world producers); salt, 6,745,000 (world rank, 4th); anthracite coal, 4,672,000 (world rank, 9th); gypsum, 4,583,000 (world rank, 3rd); barite, 58,000 (world rank, 14th); diatomite, 20,700 (world rank, 7th); magnesium, 4,989 (world rank, 6th).

Foreign Trade (1964): *Exports,* $12,341,000,000 (chief exports, 1963: nonelectrical machinery, $2,404,000,000; electrical machinery, $891,000,000; textile yarn, fabrics, $711,000,000; automobiles, $662,000,000); *imports,* $15,438,000,000 (chief imports, 1963: crude petroleum, $1,070,000,000; nonelectrical machinery, $710,000,000; sugar and honey, $482,000,000). *Chief trading partners* (1963); U.S. (took 8% of exports, supplied 10% of imports); Canada (took 4% of exports, supplied 8% of imports); Australia (took 6% of exports, supplied 4% of imports).

Transportation: *Roads* (1964), 212,314 miles (210,948 paved); *motor vehicles* (1964), 9,029,595 (automobiles, 7,563,147); *railways* (1963), 17,691 miles; *merchant vessels* (1964), 2,097 (19,797,000 gross registered tons); *airlines,* BOAC, BEA; *principal airports,* Belfast, Birmingham, Glasgow, Liverpool, London, Manchester.

Communications: *Telephones* (1964): 9,345,000; *television sets* (1963), 12,789,000; *radios* (1963), 15,882,000; *newspapers* (1962), 112 (daily circulation, 26,200,000).

CAMERA PRESS

MICHAEL STEWART was almost unknown outside Britain when he succeeded Patrick Gordon Walker as British foreign secretary on Jan. 22, 1965. But he had long been a spokesman for the inner circle of the Labour party and is highly respected for his intellect and strength of character.

(Robert) Michael Stewart was born in London on Nov. 6, 1906. A scholarship student at St. John's College, Oxford, he graduated with honors in 1929. He taught school from 1930 until 1942 when he entered the army; in 1944 he was commissioned and promoted to captain. He was elected Labour MP from East Fulham (now Fulham) in 1945, and became parliamentary secretary to the Supply Ministry in the 1945–51 Labour government. In 1961–62 he represented Britain in the Council of Europe and the Western European Union. When the Labour party returned to power in 1964, he became secretary of state for education and science. One of Britain's most literate public men, he is the author of *The British Approach to Politics*, which went into a fourth edition in 1961.

would be temporarily limited.

The budget for 1965–66 aimed principally at a $100 million reduction in domestic consumption; to this end the government increased taxes and excise duties. It increased installment-buying down payments on June 3, and reduced the time for the completion of installment payments on July 27. On February 22 it announced that the growth in government expenditures would be limited to an average of 4.25% a year until 1970. It postponed for six months many projects that had been previously approved, and limited defense expenditure to $5.6 billion at 1964 prices.

A National Board for Prices and Income, set up on March 17 by agreement between the government, management, and the unions, advised on April 8 that price increases were to be avoided and reductions made where possible, and that incomes should not increase by more than 3 to 3.5%. On September 2 the board announced that price and pay increases must be deferred until it had reported on them.

The National Plan, a coherent framework for the whole series of measures taken by the government, was published on September 16. Its main objectives are: (1) to remove the balance of payments deficit and achieve the surplus needed to repay recent borrowing (see below, *Finance*); (2) to speed up the rate of growth of output and achieve a 25% increase in national output by 1970; and (3) to get a better regional and social balance in the use of the country's resources. The government is committed to taking such action as may be necessary to fulfill the objectives of this plan.

Changes in Leadership. Following his defeat in a by-election at Leyton, Patrick Gordon Walker, Labour foreign secretary, who had lost his seat at Smethwick in the general election of 1964, resigned on January 22 and was succeeded by Michael Stewart. Anthony Crosland succeeded Stewart as secretary of state for education and science.

On February 25 the Conservative party adopted new machinery for selecting a leader, and this was used when Edward Heath replaced Sir Alec Douglas-Home, who resigned in July in the face of criticism.

Legislation. Among the important legislation passed in 1965 was a measure directed against discrimination in public places and incitement to racial hatred —the Race Relations Act, which became law on November 8. The Science and Technology Act, which became law on March 23, reorganized civil science and technology in Britain, and the new Science Research Council came into being on April 1.

The legislative program for the new parliamentary session, contained in the queen's speech on November 9, and foreshadowed by policy statements during the year, called for (1) a parliamentary commissioner for administration, (2) the establishment of a land commission with compulsory power to acquire land (the subjects of white papers on September 23 and October 12), and (3) the expansion of social and other services. Although a white paper on steel nationalization had been published on April 30, Prime Minister Harold Wilson explained to the House of Commons on November 10 that legislation to give it effect would have to wait until after more pressing social legislation had been completed.

Relations with the United States. The British government supported U.S. policy in Vietnam in spite of some criticism within Britain. It welcomed U.S. intervention in the Dominican Republic as a protection for British nationals and interests there, but felt that the situation eventually should be handled by the United Nations.

Among the British ministers visiting the United States in 1965 was Foreign Secretary Michael Stewart, who was in Washington for talks on world problems with U.S. Secretary of State Dean Rusk on March 21 and 22; and Chancellor of the Exchequer James Callaghan, who was in Washington for discussions on June 28–29, and was there again between September 27 and October 1 for the meetings of the IMF (International Monetary Fund). Prime Minister Wilson addressed the Economic Club of New York on April 14, had discussions in Washington with President Lyndon Johnson on April 15, and returned to New York and Washington in December for further discussions (see WILSON, HAROLD).

Robert McNamara, U.S. secretary of defense, visited London on May 30, and Henry Fowler, U.S. secretary of the treasury, was in London during the course of his visit to seven European countries in early September.

Relations with the Soviet Union. Britain and the Soviet Union signed a new cultural agreement in Moscow on February 13. Covering the years 1965–67, it provides for expanded cooperation in culture, sports, science, and technology. The Soviet foreign minister, Andrei Gromyko, visited London from March 16 to 20 to hold discussions with Foreign Secretary Stewart and Prime Minister Wilson. The two nations signed a five-year agreement on agricultural research in London on January 6. Britain joined France and the United States on April 7 in sending notes to the Soviet government demanding cessation of Communist interference with communications with West Berlin and protesting Communist flights over Berlin.

Anglo-German Relations. Prime Minister Wilson visited Berlin on March 6, and, with Foreign Secretary Stewart, was in Bonn from March 7 to 9. In Bonn they discussed the problem of German reunification with Ludwig Erhard, West German chancellor. On June 28 and 29 in Bonn, John Diamond, chief secretary to the British Treasury, reached an

EDWARD HEATH succeeded Sir Alec Douglas-Home as leader of the Conservative party on July 28, 1965. He was the first Conservative party leader to be elected to the post, each of his predecessors having been appointed by the outgoing party leader. He is a dedicated politician resolved to give as good as he gets in the rough and tumble of parliamentary debate.

Edward Richard George Heath was born in Broadstairs, Kent, on July 9, 1916. He won a scholarship to Balliol College, Oxford, and graduated in 1939. He entered the army as a private in 1940 and rose to lieutenant colonel of artillery in 1945. A member of the Conservative party since his university days, he was elected to Parliament from Bexley in 1950. He advanced in successive Conservative governments and, as lord privy seal, worked unsuccessfully in 1961–63 for Britain's entry into the European Economic Community (Common Market). In 1963–64 he was Douglas-Home's secretary of state for industry, trade, and regional development, and president of the Board of Trade.

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agreement with Rolf Dahlgrün, West German finance minister, on arrangements for offsetting the costs of British armed forces stationed in Germany.

The outstanding event in Anglo-German relations was the official visit to Germany of Queen Elizabeth II and the Duke of Edinburgh from May 18 to 28. Wherever they went they received a tremendous welcome.

Anglo-French Relations. Wilson and Stewart also visited Paris on April 2 and 3. Their discussions with French President Charles de Gaulle and his advisers ranged over a wide field. At a meeting in London on May 17, the British defense secretary, Denis Healey, the British minister of aviation, Roy Jenkins, and the French ministers of defense and of transport, Pierre Messmer and Marc Jacquet, signed a memorandum of understanding on the joint development of an advanced training aircraft and of an aircraft with variable geometry (wings that are swept back in flight and extended on take-off).

Other overseas visits by British ministers during the year included the prime minister's official visit to Rome from April 27 to 29, and the foreign secretary's visits to Yugoslavia from April 18 to 22, to Czechoslovakia from April 23 to 25, and to Poland from September 17 to 21. Janos Peter, the Hungarian foreign minister, visited Britain from June 30 to July 4, and the shah of Iran visited Britain from March 1 to 11.

Commonwealth Relations. Two major issues confronting the Commonwealth in 1965 were the measures taken by the British government to deal with the problems arising from immigration into Britain, and the situation in Rhodesia, which made an illegal unilateral declaration of independence on November 11. Commonwealth heads of government discussed both problems at a meeting held in London from June 17 to 25. (See COMMONWEALTH OF NATIONS; RHODESIA).

Royal Family. Members of the royal family made a number of visits overseas during the year. In addition to Germany, Queen Elizabeth II and the Duke of Edinburgh visited Ethiopia from February 1 to 8 and the Sudan from February 8 to 12. Queen Elizabeth, the queen mother, visited Jamaica from February 18 to 26, Canada from June 23 to 27, and West Germany from July 12 to 16. Princess Margaret and the Earl of Snowdon visited Uganda from March 13 to 23, the Netherlands from May 14 to 19, and the United States from November 4 to 24, following which they stopped briefly in Bermuda. The Duke of Edinburgh toured Saudi Arabia (February 12–15), Malaysia (February 17–19 and February 27–March 6), Australia (February 20–26), Thailand (March 6–9), India (March 9–12 and 15–21), Nepal (March 12–15), Pakistan (March 21–23), and Bahrain (March 24). Princess Alexandra and her husband visited Japan from September 17 to October 3.

Ceremonies. Queen Elizabeth unveiled a memorial to President John F. Kennedy at Runnymede on May 14. Present for the ceremony were Mrs. Jacqueline Kennedy and her children, Senators Robert and Edward Kennedy, and other distinguished guests, including the prime minister and former Prime Minister Harold MacMillan. U.S. Secretary of State Dean Rusk, representing President Johnson, accepted

CENTRAL PRESS

SIR WINSTON CHURCHILL, who died on Jan. 24, 1965, received a state funeral on January 30. The solemn procession leaves the gates of Westminster Hall, where he had lain in state, on its way through the London streets to St. Paul's Cathedral for funeral services.

the three acres of land at Runnymede to be held in perpetuity by the United States.

Britain celebrated the 750th anniversary of the sealing of Magna Carta on June 10 with a thanksgiving service at St. Paul's Cathedral, London, and on June 15 with a ceremony at the Royal Courts of Justice. Englishmen honored the anniversary of Simon de Montfort's parliament, the beginning of parliamentary government in Britain, in a ceremony at Westminster Hall on June 22.

Space Research. In the early part of 1965 the government made extensive modifications at the British earth station at Goonhilly, Cornwall. The changes cost about $2 million, which was the approximate cost of the original station. The improvements are intended to meet the demands of commercial communications satellites, the first of which is Early Bird, launched by the United States on April 6 from Cape Kennedy, Fla.

Defense. The Labour government's first annual statement on defense, issued in February, proposed the expenditure of $5,937.4 million for 1965–66, an increase of 2.3% over the previous year. It also announced a review of defense commitments. The minister of defense, Denis Healey, said on August 4 that the government's target was to return by 1969–70 to the 1964–65 level of defense expenditure, that is, no more than $5,600 million, at constant prices. In the first nine months the government had gone half way to its goal by making such changes in the equipment program as the cancellation of the TSR 2 aircraft and a fourth Polaris submarine; by the reorganization of the reserve program; and by a careful scrutiny of weapons production. (See also AERONAUTICS; MISSILES.)

The basic principles guiding the deployment of Britain's forces are (1) to retain in overseas theaters the minimum force to fulfill commitments; and (2) to hold a strategic reserve in Britain, with the air transport necessary to reinforce any area of the world at maximum speed. The deployment of British manpower throughout the world is broadly as follows: United Kingdom, 241,000; West Germany (including Berlin), 62,000; Mediterranean, 23,000; East of Suez, 72,000 (including 14,000 Gurkhas); elsewhere, 9,000—a total of 407,000 troops.

Atomic Energy. Of great importance to the future of the nuclear power program was the decision to use the British-designed AGR (advanced gas-cooled reactor) for the first of the second-generation electricity-generating stations, Dungeness "B" (in Kent). The AGR was chosen because of its reliability and lower operating cost. The minister of power, Frederick Lee, announced the decision on May 25, 1965, after bids had been submitted for both AGR and water-moderated reactors. The new station, to be completed in 1970, will have an output of 1.2 million kilowatts.

The Science and Technology Act of 1965, which became law on March 23, allows the AEA (Atomic Energy Authority) to undertake some research and development not involving atomic energy. The AEA has assumed responsibility for desalination research and development. It is working with the Medical Research Council on centrifuges, and with ESRO (European Space Research Organization) on the payload of a rocket.

Assets of the AEA on March 31, 1965, totaled $1,202 million. The annual profits on such AEA trading activities as the manufacturing of nuclear fuel and the supplying of radioisotopes is about $84 million a year. (See also ATOMIC ENERGY.)

Finance. The budget introduced on April 6 estimated revenue for 1965–66 at $25,272,800,000 and expenditure at $23,749,600,000, leaving a surplus of $1,523,200,000. Expenditure estimates included $6,246,800,000 for defense, $5,334,000,000 for health and welfare, $2,616,000,000 for economic services, and $739,200,000 for education.

Britain's balance of payments, which showed a deficit of $218,400,000 in 1963, was also in heavy deficit through 1964, and though there was some improvement in the fourth quarter of the year, the overall deficit reached $2,086,000,000. Because of drastic measures taken by the government, however, the position improved in the first half of 1965, when the deficit over the six-month period was $285,600,000, compared with $873,600,000 in the corresponding period of 1964. The government restricted expenditures, increased taxation, and continued the import levy, although it reduced the levy from 15% to 10% on April 17. It also announced on February 11 that it was renewing the $3 billion credit facilities arranged in November 1964.

To strengthen the pound in the exchange markets, the Bank of England announced on September 10 that it had made credit arrangements with the central banks of Austria, Belgium, Canada, West Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the U.S. Federal Reserve Bank, and the Bank for International Settlements. As a result of the improving position, the bank rate, which had stood at 7% since Nov. 23, 1964, decreased to 6% on June 3.

Gold and dollar reserves of the sterling area amounted to $2,791,600,000 on June 30, 1965, compared with $2,704,800,000 on June 30, 1964, and $2,315,600,000 on Dec. 31, 1964. On Dec. 31, 1965, they totaled $3,004,400,000.

Taxation. The standard rate of income tax for individuals and corporations, raised to 41.25% in the November 1964 supplementary budget, was continued for the year 1965–66. Two ninths of the first $11,214 of an individual's earned income is exempt from tax, plus one ninth of the balance up to $27,846. Additional exemptions are $616 for a single person, $952 for a married couple, and $322 to $462 for children according to age. Surtax is payable on gross income over $5,600 at rates varying from 10 to 50%, abated by various reliefs and certain special allowances.

Corporations are taxed at the standard income tax rate on the whole of their profits, and must pay an additional 15% profits tax on earnings over $5,600 a year. A 30% capital gains tax for individuals was introduced in the 1965–66 budget. A company's capital gains will be charged against the corporation tax also introduced in the 1965–66 budget, and will not be more than 40%.

A sales tax is charged on a wide range of goods at one of three rates—10, 15, or 25%.

External Trade. Britain's trade deficit rose sharply in 1964, averaging $123.2 million a month, compared with $11.2 million a month in 1963. A steady rise in the first three quarters of 1964 was halted in the fourth, when exports increased while imports remained at about the same level. Exports, at $12.3 billion, were higher than in 1963, higher prices and increased volume making about equal contributions to the increase. Re-exports totaled $428 million. Imports rose strongly during the first half of 1964, but leveled off in the second half, for a total of $15.4 billion, 15% more than in 1963. More than half of this increase was in industrial materials; the remainder was in food, consumer goods, and machinery and other capital equipment.

In the first half of 1965, exports showed a 4% increase, for a six-month total of $6.5 billion, while imports decreased by 1%, for a six-month total of $7.99 billion. Re-exports in the same period were $231.8 million. The trade deficit was consequently running much lower than the 1964 level, at an average rate of $72.8 million a month. The chief commodity export increases were electrical machinery (6%), metals and miscellaneous metal manufactures (6%), transport equipment (5%), and other machinery (4.5%). Exports of basic materials fell by 12% compared with a year earlier, and exports of fuels, particularly coal, by 3.5%.

Food imports fell by 6%, finished manufactures by 1.5%, and imports of basic materials by 1%. Consumer goods showed a generally decreasing pattern, clothing and footwear falling by 25%. Petroleum increased by 13% and machinery and transport equipment by 4%. In the third quarter of the year, the average monthly rate of exports rose by 5%, imports remaining at about the same level as in the second quarter. The monthly trade deficit averaged $75.6 million during the quarter, but fell to $64.4 million in September.

Industrial Production. It was estimated that industrial production in 1964 was 7.6% higher than in 1963. In the first half of 1965, production averages were substantially higher. Steel production in 1964 totaled 26,234,000 tons, or 14.5% higher than in 1963. Production of passenger cars rose 14% to a total of 1,868,000 units; commercial vehicles increased 13%; and machine tools, 6%.

Agricultural Production. Production of most agricultural crops, with the exception of oats and vegetables, increased in 1964. Arable land in June 1965 totaled 18,382,000 acres, of which 6,551,000 acres were in temporary grassland. Animals on agricultural holdings at the same date totaled 30,015,000 sheep, 11,992,000 cattle, and 8,065,000 pigs. The total poultry population was 115,406,000.

Education. On Feb. 24, 1965, the secretary of state for education and science, Anthony Crosland, announced that the government proposed to expand existing universities and other institutions of university status to accommodate 218,000 university students by 1973–74. With the possible exception of a new technological university in the northeast, no new universities would be created in the next 10 years. Instead of establishing new advanced technological institutions, it would expand the technological departments of existing universities. On February 1 the government announced that its grant to the universities, administered through the university grants committee, would be increased by $16.24 million through 1966–67. The amount of the grant for 1965–66 is thus $278.04 million, and for 1966–67, $307.44 million.

On July 12, Crosland outlined acceptable forms of organization for comprehensive schools and asked local education authorities to submit plans for their areas within a year. This was the first step toward the creation of a comprehensive system of secondary schools. A program of research into various methods of organizing and running comprehensive schools was announced on September 30.

By means of the queen's speech at the opening of Parliament on November 9, the government announced its intention to integrate the public (private) schools more closely into the national system of education.

WIDE WORLD

THE BEATLES display Order of the British Empire medals presented to them by Queen Elizabeth on Oct. 26, 1965.

Health Services. The cost to the government of the health and welfare services was estimated at $2,556.4 million in 1965–66, compared with an estimated cost of $2,332.4 million in 1964–65. In each of the past three years the government allocated between 12.4 and 12.8% of the national budget to health and welfare services. During 1964, the number of medical doctors decreased by 0.5%, though the enrollment in medical schools increased. During both 1964 and 1965, there was increasing dissatisfaction by members of the medical profession both with the conditions of general practice and with the remuneration of physicians engaged in it. There was a notable growth in hospital building, with capital expenditure rising by $56 million during the year to $156.8 million. A 500-bed general hospital was opened in Cumberland, and a 500-bed mental hospital near Newport, Monmouthshire. Scotland spent over $16.8 million on hospital building in 1963–64, completing 10 major building projects.

Transport. In 1964, British railroads reduced their working deficit by $39.48 million to an annual figure of $189 million. Although increased revenue accounted for about $14 million of the reduction, economies made in the operation of the railroads were the major factor in this deficit reduction. Capital investment of $392.4 million during the year was concentrated on increasing the number of diesel locomotives and on signaling and electrification schemes. In 1965 the government approved 123 proposals in its continuing program to eliminate unprofitable passenger services.

Although on Aug. 19, 1965, the government announced the postponement of any major new road schemes for six months, as a part of the general deferment of government expenditure, by the end of the month Britain had opened 358½ miles of a new system of highways, started construction on another 140 miles, decided on the routes of a further 237 miles, and published plans for an additional 131 miles.

On July 28 the National Ports Council recommended development projects costing between $320 million and $334 million at 14 major ports. A committee under the chairmanship of Lord Devlin, in the report published on August 5, made radical proposals for solving the long-standing labor problems in Britain's docks.

BOAC (British Overseas Airways Corporation) made a record profit of $21.3 million in 1964–65, and BEA (British European Airways) showed a profit of $3.6 million in the same period. (See also EUROPE.)

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JILL KREMENTZ FROM NANCY PALMER

UPI

GREEK GOVERNMENT CRISIS began on July 15, 1965, when Premier George Papandreou (*left*) resigned after dispute with King Constantine. Elias Tsirimokos (*right*, in dark suit) and then Stephan Stephanopoulos (in light suit) succeeded him in office.

GREECE

A great political crisis, a church-state controversy, and the birth of a first child to King Constantine and Queen Anne-Marie dominated the year 1965 in Greece. The government once again struggled with problems arising from the rivalries between Greek and Turkish Cypriotes on Cyprus.

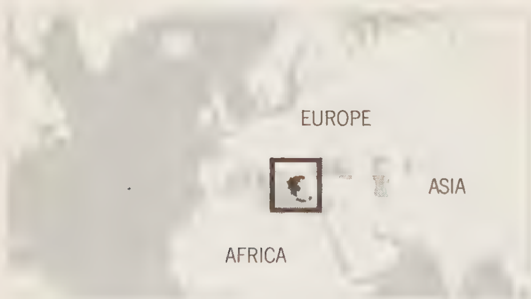
Political Crisis. A dispute between 25-year-old King Constantine and 77-year-old Premier George Papandreou came to the fore in July when the premier sought to replace the minister of defense, Peter Garoufalias, and to purge the army of conservative officers whom Papandreou considered potentially disloyal to his regime.

Prior to the attempted purge, a left-wing organization named Aspida (the Shield) had been discovered in the army. Papandreou's son, Andreas, who was deputy minister of economic coordination, was rumored to be connected with Aspida, although he denied the allegation. Under these circumstances, the king blocked the premier's plan to dismiss the conservative army officers.

Papandreou announced his intention to resign as premier on July 15 when the king refused to sign a decree giving him control of the Ministry of Defense. Constantine, acting within his constitutional prerogatives, quickly replaced the premier and the ministry by naming a new government under the president of the Parliament, George Athanasiadis-Novas, a member of Papandreou's Center Union party. Athanasiadis-Novas, faced with the outbreak of obviously well-organized pro-Papandreou street demonstrations in Athens and other cities, failed to win a vote of confidence in Parliament on August 4. He was succeeded by Elias Tsirimokos, who became Greece's first Socialist premier on August 19.

He, too, failed to win a vote of confidence, however, primarily because Papandreou kept tight control over most of the Center Union deputies. Stephan Stephanopoulos, former deputy premier under Papandreou, assumed the premiership on September 18. Having formed a coalition with the National Radical Union and the Progressives, both conservative parties, he won a slim majority in Parliament on September 25.

GREECE · Information Highlights



Area: 50,547 square miles.
Population: 8,510,000 (June 30, 1964 est.).
Chief Cities (1961 census): Athens, the capital, 627,564; Salonika, 250,920; Piraeus, 183,877; Patras, 95,364.
Government: *King*—Constantine II (acceded to the throne on March 6, 1964); *Premier*—Stephanos Stephanopoulos; *Parliament*—300 members; party seating (1965)—Center Union (171), National Radical Union (99), United Democratic Left (22); Progressives (8).
Religious Faiths: Greek Orthodox, 97% of population; Roman Catholics, 0.5%; Protestants, 0.2%.
Education: *Literacy rate* (1961)—80% of population aged 15 and over. *Total school enrollment* (1960–61)—1,277,817 (primary, 921,205; secondary, 273,390; technical 53,883; higher, 29,339).
Finance (1965 est.): *Revenues*, $933,000,000; *expenditures*, $923,000,000; *public debt* (1964), $979,000,000; *monetary unit*, drachma (30.00 drachmas equal U.S.$1).
Gross National Product (1964): $5,003,000,000.
National Income (1964): $4,123,000,000; average annual income per person, $484.
Economic Indexes (1964): *Industrial production*, 154 (1958=100); *agricultural production*, 146 (1956–57=100), *cost of living*, 110 (1958=100).
Manufacturing (metric tons): Cement (1964), 2,672,000; wheat flour (1962), 1,015,000; gasoline (1963), 256,000; meat (1962), 147,000; cheese (1962), 116,000; sugar (1964), 69,000; cotton yarn (1964), 30,120.
Crops (metric tons, 1964): Wheat, 2,169,000 (ranks 18th among world producers); grapes, 1,229,000; citrus fruit, 322,000 (world rank, 13th); olives, 650,000 (world rank, 3rd); potatoes, 633,000; tomatoes, 538,000; maize, 290,000; barley, 278,000; oats, 155,000; dry onions, 143,000; tobacco, 131,500.
Minerals (metric tons, 1964): Lignite (1963), 3,804,000; bauxite, 1,300,000 (world rank, 9th); barite, 68,000 (world rank, 12th); magnesite, 200,000; pyrites, 140,000; salt, 100,000; gypsum, 95,000; pumice, 80,000; iron ore, 60,000.
Foreign Trade (1964): *Exports*, $309,000,000 (chief exports: tobacco, $119,000,000; currants, raisins, grapes, $40,000,000); *imports*, $885,000,000 (chief imports, 1963: nonelectrical machinery, $110,400,000; ships and boats, $68,900,000; iron and steel, $46,100,000). *Chief trading partners* (1963): West Germany (took 19% of exports, supplied 18% of imports); U.S. (took 19% of exports, supplied 11% of imports); Britain (took 8% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 24,186 miles (6,188 paved); *motor vehicles* (1964), 124,693 (automobiles, 67,576); *railways* (1963), 1,587 miles; *merchant vessels* (1964), 867 (6,882,000 gross registered tons); *national airline*, Olympic Airways; *principal airports*, Athens and Salonika.
Communications: *Telephones* (1964): 356,378; *radios* (1963), 800,000; *newspapers* (1959), 79 (daily circulation, 1,000,000).

PICTORIAL PARADE

JILL KREMENTZ FROM NANCY PALMER

GREECE struggled through ten weeks of political strife in 1965. Deputies fought in National Assembly (*left*) after failure of Elias Tsirimokos' government, and Athens students demonstrated (*right*) for return of former Premier George Papandreou.

The pro-Communist United Democratic Left steadfastly backed Papandreou. The ex-premier called for national elections, a step to which the king would not give his approval. Meanwhile, the street demonstrations had become more antiroyalist than pro-Papandreou. They were aimed chiefly at the king and his mother, Queen Frederika. However, when King Constantine and his wife, Queen Anne-Marie, toured some of the Aegean islands in the autumn, they were greeted enthusiastically by large crowds.

Ecclesiastical Difficulties. The question of transferring bishops from poorer to richer dioceses and the selection of new bishops provoked a dispute between the Stephanopoulos government and the Greek Orthodox state church. Despite governmental opposition, 36 of Greece's 51 bishops in November elected new bishops and transferred others to vacancies among Greece's 66 dioceses. The next month the government proposed that Parliament pass legislation making extensive changes in ecclesiastical administration and finance. This was called unacceptable by the bishops and, at the year's end, the dispute remained unresolved.

Foreign Policy. Greece's foreign policies were largely centered on the Cyprus issue. The Greek-Cypriote majority on the island wished to change the provisions of the Cypriote Constitution, which gave the Turkish minority broad veto rights over legislation. The Turkish government, supporting the Cypriote Turks, continued a policy (started in 1964) of deporting Greek subjects from Turkey.

Archbishop Makarios, the Cypriote president, stressed that the union of Cypress with Greece should be the ultimate solution for the unsettled conditions on the island. On the feast day of St. Constantine (May 21), the archbishop telegraphed King Constantine, reiterating his hope that Cyprus would soon be united with Greece under Constantine's scepter. Glavkos Clerides, president of the Cypriote Parliament, sent a similar message to the king. Archbishop Makarios, however, seemed opposed to any bilateral efforts by Greece and Turkey to reach agreement on Cyprus without reference to the United Nations.

Premier Papandreou's projected visit to the Soviet Union in May was postponed after the Soviet foreign minister, Andrei Gromyko, during a visit to Turkey, spoke in support of a federated government of Greeks and Turks in Cyprus. Such a solution was totally unacceptable to the Greek government.

Royal Family. Prince Michael, cousin of King Constantine, renounced his rights to the throne and married a commoner, Marina Karella, in February. The king served as best man at the wedding.

Queen Anne-Marie, a Lutheran when she married King Constantine in September 1964, was received into the Greek Orthodox Church on April 21. On July 10 the queen gave birth to a daughter, who was named Alexia, in honor of the Byzantine dynasty of the Comneni and its founder, Emperor Alexius I. Princess Alexia, heiress-presumptive to the throne, was christened in Athens on September 20 with Queen Frederika as a sponsor. Attending the ceremony also were Queen Anne-Marie's parents, King Frederick IX and Queen Ingrid of Denmark.

Economy. The Papandreou government's policy of increasing subsidies for wheat farmers caused food prices to rise, producing an inflationary effect on the economy. The unsettled political conditions during the summer threatened to damage the country's important tourist industry by frightening off potential visitors. The completion in May of the first direct railroad route between Athens and Sofia, Bulgaria, was expected to increase Greek trade with Bulgaria. Greek laborers seeking employment continued to emigrate to western Europe, particulary to West Germany.

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GREEK ORTHODOX CHURCH. See Religion—*Eastern Orthodoxy*.

GRISSOM, Virgil I. See biographical sketch under Space Exploration.

GUAM. See Pacific Islands.

UPI

QUEEN ANNE-MARIE holds her first child, Crown Princess Alexia, during the christening ceremonies in Athens on September 20. The baby was born on July 10 and named for Emperor Alexius I, founder of the Byzantine Comneni dynasty.

GUATEMALA

Col. Enrique Peralta Azurdia, Guatemalan chief of state and defense minister, maintained an administration untainted by corruption in 1965. Since seizing power by force on March 31, 1963, Peralta Azurdia has attempted to guarantee protection of person and property, to correct the mistakes of the previous administration, and to restore the country to constitutional government. In 1965, however, there was some public uneasiness over problems relating to the new constitution, forthcoming general elections, and Communist subversion.

New Constitution. Guatemala returned to constitutional government on September 15, when a new constitution, replacing the one suspended after the military coup of 1963, went into effect. The constituent assembly that was elected to draft the new constitution began its deliberations in March. In June it was announced that the new constitution would go into effect on Central America's independence day (September 15), that general elections would be held in March 1966, and that the new president, National Congress, and municipal governments would be inaugurated in July 1966.

In August, 14 deputies to the constituent assembly resigned in protest against the adoption of a constitutional article allowing members of the military regime to run for office in the general election. Elections to replace the resigned deputies were held August 1. More than half of the eligible voters stayed away from the polls, and over 60% of the ballots cast were blank. The election results were interpreted by some opposition leaders as popular expressions of lack of confidence in the Peralta Azurdia government.

Presidential Candidates. Three candidates for the presidency emerged after elections were set for March 1966. The only liberal, antigovernment candidate, Mario Méndez Montenegro, was shot to death on October 31—the day before he was to have opened his campaign. Méndez, a lawyer, was the nominee of the left-wing, anti-Communist Revolutionary Party.

The other two candidates were Col. Miguel Angel Ponciano Samayoa, candidate of the National Liberation Movement, and Col. Juan de Díos Aguilar de León, candidate of the Institutional Democratic Party. As candidates of officially sanctioned right-wing parties, they promised a continuation of the policies of the Peralta Azurdia regime.

Col. Peralta Azurdia declared in an interview: "I will absolutely not be a candidate for the presidency."

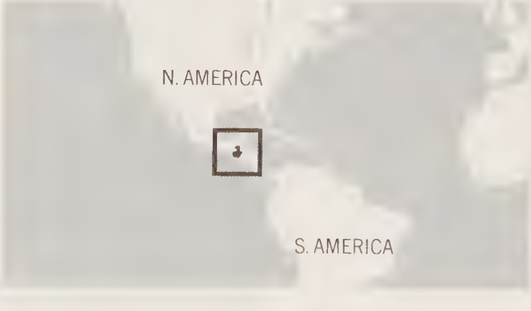
State of Siege. Communist terrorist activities led Col. Peralta Azurdia to proclaim a state of siege which lasted from February 24 to July 28. The vice minister of national defense, Col. Ernesto Molina Arriaga, was assassinated on May 21 by six men believed to be Communists.

When it was announced in June that general elections would not be held until March 1966, the Communists responded by bombing the Costa Rican, Nicaraguan, and Brazilian embassies, the homes of the editor and the advertising manager of the anti-Communist daily *Prensa Libre,* and the oil storage tanks of the inter-American railroad. The same embassies, as well as the Honduran embassy, were bombed on June 7, ostensibly because these countries had sent troops to serve in the Inter-American Peace Force in the Dominican Republic.

By July, guerrilla bands controlled the mountainous areas of the Sierra de las Minas, and organized Communist groups harassed towns and cities. Marco Antonio Yon Sosa, a graduate of Cuba's guerrilla training camp at Minas del Frío, was nominal head of the three most militant Communist groups.

Economy. Boom conditions continued in Guatemala during 1965, although economic development did not equal the record-breaking performance of 1964. Guatemala's imports increased by 18%, to reach $86 million in the first five months of 1965. Exports during the same period increased 5%, to a total of $87 million. The country was troubled by a growing trade deficit and by the fact that it could not export $40 million worth of coffee because of the terms of the International Coffee Agreement. Steadily increasing trade with other members of the Central American Common Market (CACM) helped to increase Guatemala's industrial production and gross national product.

GUATEMALA · Information Highlights



Area: 42,042 square miles.
Population: 4,304,000 (June 30, 1964 est.).
Chief Cities (1964 prelim. census): Guatemala City, the capital, 572,937; Quezaltenango, 45,195; Escuintla, 24,832; Puerto Barrios, 22,342; Mazatenango, 19,506; Chiquimula, 14,760; Retalhuleu, 14,366.
Government: *Chief of State*—Col. Enrique Peralta Azurdia (took office March 31, 1963, after military coup d'état). *Parliament—National* Congress (dissolved after 1963 coup d'état).
Religious Faiths: Roman Catholics, 92% of population; others, 8%.
Education: *Literacy rate* (1961)—70% of population aged 10 and over. *Total school enrollment* (1962)—395,835 (primary, 353,084; secondary, 28,055; teacher-training, 4,158; technical, 4,631; higher, 5,907).
Finance (1965 est.): *Revenues,* $166,000,000; *expenditures,* $166,000,000; *public debt* (1964), $99,100,000; *monetary unit,* quetzal (1 quetzal equals U.S.$1).
Gross National Product (1964): $1,310,700,000.
National Income (1963): $1,034,000,000; average annual income per person, $253.
Economic Indexes (1964): *Industrial production,* 133 (1958=100); *agricultural production,* 171 (1956–57=100); *cost of living,* 100 (1958=100).
Manufacturing (metric tons): Cement (1964), 186,000; sugar, (1964), 145,000; wheat flour (1963), 60,000; meat (1961), 40,000; beer (1963), 17,900.
Crops (metric tons, 1964–65 crop year): Coffee, 96,000 (ranks 9th among world producers); maize, 575,000; bananas (1963–64), 142,000; cottonseed, 115,000; dry beans, 41,000; cocoa beans (1962–63), 700.
Minerals (metric tons, 1963): Salt, 19,000; clays, 15,292; gypsum, 14,794; iron ore (1964), 7,100; zinc, 1,169; lead (1964), 200; silver, 64,200 troy ounces.
Foreign Trade (1964): *Exports,* $158,000,000 (chief exports: coffee, $72,300,000; cotton, $23,200,000; bananas, $9,400,000); *imports,* $202,100,000 (chief imports, 1961: nonelectrical machinery, $16,934,000; petroleum products, $12,841,000; motor vehicles, $9,979,000). *Chief trading partners* (1963): U.S. (took 43% of exports, supplied 48% of imports); West Germany (took 17% of exports, supplied 10% of imports); Japan (took 11% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 7,575 miles (930 paved); *motor vehicles* (1964), 42,027 (automobiles, 30,262); *railways* (1963), 510 miles; *merchant vessels* (1964), 2 (4,000 gross registered tons); *government airline,* Aviateca; *principal airport,* Guatemala City.
Communications: *Telephones* (1964): 20,000; *television stations* (1964), 3; *television sets* (1964), 50,000; *radios* (1961), 210,000; *newspapers* (1962), 8 (daily circulation, 125,000).

In July the government announced a new code to encourage mining ventures. There was some delay in granting special benefits to new manufacturing plants and businesses, but this did not seem to discourage investment applications, which were spurred by the income tax reform of 1963. The administration also initiated fiscal reform during 1965 and continued work on housing projects and a road-building program. Businessmen applauded the Peralta administration for its prompt payment of debts.

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GUINEA

Although Guinea's economy did not show significant improvement during 1965, the country's economic position was strengthened somewhat by promises of assistance from both the Soviet Union and the United States. The most important aid project announced in 1965 was for a Soviet-financed hydroelectric plant and aluminum smelter on the Konkouré River in central Guinea. U.S. assistance agreements formally entered into during the year included a civic action agreement, an investment guarantee to an American mining firm, and a civil aviation agreement. Guinea severed diplomatic ties with both France and Britain in 1965.

Economic Problems. Guinea continued to import rice in 1965 in response to food shortages created by a decrease in production coupled with a growing population. The shortages were brought about largely by difficulties in operating the state trading system responsible for distributing domestically produced foodstuffs.

Although Guinea's currency is nominally valued at par with the French-backed franc of the African Financial Community (CFA), it continued to be nonconvertible. The resulting foreign exchange deficit prevented the import of necessary machine parts and products, contributing to an increase in the country's unused industrial capacity.

Konkouré Dam Project. Shortly after President Sékou Touré returned from a trip to Moscow in August, the Guinean government announced that the Soviet Union had agreed to finance a huge dam, hydroelectric station, and aluminum smelter on the Konkouré River in Guinea. The proposed project, as explained by President Touré, would contribute greatly to the exploitation of Guinea's enormous bauxite reserves and sizable iron ore deposits.

Agreements with the United States. On June 29, 1965, the United States signed a civic action agreement with Guinea. In July, Ismaël Touré, minister of economic development and a brother of the president, visited the United States to attend a meeting of the Board of Directors of the Compagnie des Bauxites de Guinée. The company is owned jointly by the government of Guinea and Halco (Mining) Inc., a wholly owned subsidiary of the Harvey Aluminum Company, which was issued a specific risk guarantee by the U.S. Agency for International Development (AID). The company contemplates a 16–20-million-dollar investment to develop bauxite reserves in the Boké region, which are believed to constitute the richest-known deposits of the mineral in the world.

A civil aviation agreement reached by Guinea and the United States consists of a technical assistance grant and a loan program to put Air Guinée, the national airline, on a sound economic basis. Technical assistance funds provided by AID will be used for training Guinean personnel in the United States and Guinea. The loans will finance the purchase of aircraft, spare parts, and a hangar installation.

Political Developments. On November 15 the government of Guinea accused two French ministers, the presidents of Ivory Coast, Niger, and Upper Volta, and former Congolese Prime Minister Moise Tshombe of conspiring with subversive Guinean factions to overthrow the Guinean government. The government implicated a number of high-ranking Guineans in the plot and expelled the French ambassador. On November 19, President Touré shuffled his cabinet, reassigned a number of army officers, and placed under his direct control the police and the security services. France and Guinea subsequently severed diplomatic relations.

In the following month, Guinea was the first of a group of nine African nations to break diplomatic relations with Britain over Rhodesia's declaration of independence from Britain. Earlier, in October, President Touré had attended the third annual summit meeting of the Organization of African Unity (OAU) at Accra, Ghana. (See also Africa).

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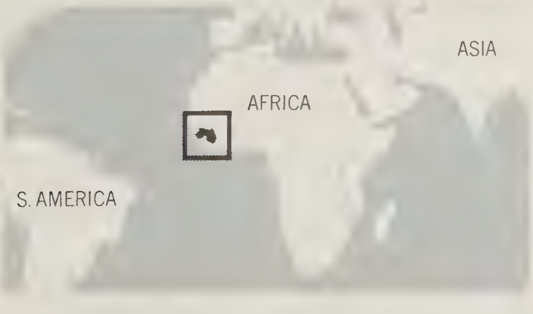
GUINEA · Information Highlights



Area: 94,925 square miles.
Population: 3,420,000 (Aug. 31, 1964, est.).
Chief Cities (1963 est.): Conakry, the capital, 78,000; Kankan, 25,000.
Government: *President*—Sékou Touré (took office Oct. 28, 1958). *Parliament*—National Assembly, 75 members (all belonging to the Guinea Democratic party).
Religious Faiths: Muslims, 61% of population; tribal religions, 37%; Roman Catholics, 1%; others, 1%.
Education: *Total school enrollment* (1962–63)—169,880 (primary, 159,494; secondary, 6,111; teacher-training, 1,023; technical, 3,167; higher, 85).
Finance (1965): *Revenues,* $54,300,000; *expenditures,* $54,300,000; *monetary unit,* Guinea franc (246.85 francs equal U.S.$1).
Economic Index: *Cost of living* (1960), 108 (1958=100).
Crops (metric tons): Palm kernels (1963–64), 23,000 (ranks 10th among world producers); bananas (1963–64), 75,000; peanuts (1964–65), 14,500; coffee (1964–65), 9,300.
Minerals (metric tons, 1964): Bauxite, 1,679,000 (ranks 6th among world producers); iron ore, 767,000; gem diamonds, 22,000 carats (exports).
Foreign Trade (1963): *Exports,* $55,100,000 (chief exports, 1962: alumina, $26,800,000; fresh bananas, $4,500,000; palm nuts and kernels, $3,000,000; raw coffee, $2,900,000); *imports,* $46,100,000 (chief imports, 1962: printed cotton fabrics, $7,200,000; rice, $6,300,000; nonelectrical machinery, $4,800,000). *Chief trading partners* (1962): France (took 18% of exports, supplied 15% of imports); USSR (took 6% of exports, supplied 20% of imports); U.S. (took 11% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 4,725 miles; *motor vehicles* (1964), 19,300 (automobiles, 7,300); *railways* (1964), 411 miles; *merchant vessels* (1964), 1 (11,000 gross registered tons); *airline* (1965), Air Guinée; *principal airports,* Conakry and Kankan.
Communications: *Telephones* (1964): 4,200; *radios* (1961), 40,000; *newspapers* (1962), 1.

HAITI

N. AMERICA
S. AMERICA

The Republic of Haiti, which comprises the western third of the island of Hispaniola in the West Indies, experienced no major changes during 1965 in its economy or politics. The dictatorship of President François Duvalier remained unshaken, and the economy stagnant. In foreign affairs, the government attempted to improve relations with France, Canada, the Dominican Republic, and the United States. As Haitian exile organizations were much less active than before, the number of government terrorist activities declined.

Political Developments. Although overt opposition to President Duvalier within Haiti virtually disappeared in 1965, the government remained sensitive to all forms of criticism. A Catholic prelate was placed under house arrest for urging the release of political prisoners, and the United States was presented with an official protest because of private anti-Duvalier broadcasts from New York. On the other hand, Duvalier made some reparations for Catholic properties seized in 1964. Moreover, he quietly permitted those people who sought asylum in foreign embassies to leave the country, thus reversing his previous policy.

The regime remained highly personalistic, with little systematic organization. Duvalier, who became president for life under the new constitution of May 1964, continued to make major decisions of government, as well as minor ones. Duvalier employs persons from all walks of life to spy on his civil officials and military officers. During 1965, however, he restrained his personal secret police, the Ton-Ton-Macoute. By banning them from the country's international airport near Port-au-Prince and from the customs houses, he attempted to prevent them from interfering with tourists. Duvalier also named a special commission to investigate and recommend corrective measures for customs operations.

HAITI · Information Highlights

Area: 10,714 square miles (June 30, 1965 est.).
Population: 4,660,000 (June 30, 1965 est.).
Chief Cities (1961 est.): Port-au-Prince, the capital, 151,220; Cap-Haïtien, 27,538; Gonaïves, 15,373; Les Cayes, 13,088.
Government: *President*—François Duvalier (appointed president for life, June 22, 1964). *National Assembly*—58 members, all belonging to the Parti Unique de l'Action Revolutionnaire et Gouvernementale.
Religious Faiths: Roman Catholics, 80% of population; others (including voodoo), 20%.
Education: *Literacy rate* (1950)—11% of population aged 15 and over. *Total school enrollment* (1963)—253,815 (primary, 230,937; secondary, 17,310; teacher-training, 177; vocational, 3,668; university, 1,723).
Finance (1965 est.): *Revenues,* $28,660,000; *expenditures,* $28,660,000; *public debt* (1962), $54,360,000; *monetary unit,* gourde (5 gourdes equal U.S.$1).
Economic Index (1964): *Cost of living,* 106 (1958=100).
Manufacturing (metric tons): Sugar (1963), 68,000; cement (1964), 55,940.
Crops (metric tons): Sugarcane (1964–65), 65,000; coffee (1964–65), 33,300; bananas (1962–63), 25,000; sisal (1963), 18,000; cocoa beans (1964–65), 3,000.
Minerals (metric tons, 1964): Bauxite, 379,000 (ranks 17th among world producers); lime, 163,000; copper, 5,632; gold, 5,900 troy ounces.
Foreign Trade (1964 est.): *Exports,* $40,000,000 (chief exports: coffee, $19,400,000; sisal, $3,680,000; sugar, $2,500,000); *imports,* $41,000,000 (chief imports: cotton manufactures; foodstuffs; machinery; mineral oils; vehicles). *Chief trading partner* (1962–63): United States (took 62% of exports, supplied 59% of imports).
Transportation: *Roads* (1964), 2,024 miles (275 paved); *motor vehicles* (1964), 12,200 (automobiles, 7,800); *railways* (1963), 187 miles; *merchant vessels* (1964), 2 (12,000 gross registered tons); *principal airport*—Port-au-Prince.
Communications: *Telephones* (1964): 4,400; *television stations* (1964), 1; *television sets* (1964), 3,500; *radios* (1961), 21,000; *newspapers* (1963), 4 (daily circulation, 25,000).

In February and March there were persistent rumors that Duvalier was about to proclaim himself emperor. Official sources denied the rumors, but placards hailing the president as "L'Empereur" and "François I" appeared during Mardi Gras. Nothing came of it, however.

Economic Problems. Haiti's economy limped along in 1965. In August 1964, Hurricane Cleo had inflicted some damage on coffee, the main crop. Coffee exports, however, for the fiscal and marketing year (Oct. 1, 1964 to Sept. 30, 1965) amounted to about 370,000 bags, a slight rise over the preceding year. Sugar and sisal both suffered from a decline in world prices.

The country's physical plant deteriorated further in 1965. Eyewitnesses described the capital of Port-au-Prince and the temporary terminal at the new jet airstrip there as "ramshackle." Public services operated at a low level; streets and roads were potholed, sidewalks had crumbled, and harbors were virtually empty. No social or public works were undertaken. Funds were lacking to buy essential government supplies because tax collections reportedly had declined to only 20% of the 1963 level. Tourist trade increased somewhat after the opening of the new jet airstrip near Port-au-Prince, but tourism alone was insufficient to spark an economic upturn.

Government Attempts to Ease Economic Difficulties. The government attempted to ease its economic troubles by means of international agreements, bond issues, and some curious financial deals. Early in 1965, Duvalier moved to reach an understanding with the Dominican Republic, the principal staging area for Haitian exile invasions. The Dominican uprising in April halted discussions.

Approaches to France and Canada for trade and aid produced no results. Although the United States did not reopen its Agency for International Development (AID) office in Port-au-Prince, it did continue malaria-eradication and surplus-food programs.

Duvalier tried to infuse some life into the economy by giving broad concessions to some private international operators. These projects backfired when one of the entrepreneurs absconded with large sums of government money. Other government efforts included authorizing a new bond issue in March and decreeing a forced loan in May from electric power consumers who had to purchase special government bonds in proportion to their electricity bills. The economic crisis continued, however.

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HANDBALL. See SPORTS.

HARNESS RACING. See SPORTS.

HARRISON, Rex. See biographical sketch under MOTION PICTURES.

HAWAII

The first session of Hawaii's 3rd state Legislature, with overwhelmingly Democratic majorities in both houses, convened on Feb. 17, 1965, in the midst of what many observers considered to be a crisis in state politics.

Political Leadership Struggle. Early in the session a bitter leadership struggle unseated Senate President Nelson Doi, who was replaced by Sen. Kazuhisa Abe, a veteran Democratic legislator from the island of Hawaii. The leadership struggle and its aftermath had profound effects on two issues facing the Legislature: (1) the enactment of a reapportionment bill that would satisfy the federal district court which had declared Hawaii's present plan unconstitutional; and (2) the questions of overhauling the tax system and granting salary increases to state employees, particularly those employed in the public schools and by the University of Hawaii.

Reapportionment. A special session of the Legislature in 1964 failed to enact a reapportionment bill. As a result, early in the 1965 regular session a federal district court directed the Legislature to call a constitutional convention to arrange for reapportionment. Fearful of the results that such a convention might produce, the Legislature sought and received from the court another chance to enact an acceptable apportionment measure. After a dramatic struggle, the legislators produced a reapportionment bill that the district court then rejected. The state appealed the court's decision to the U.S. Supreme Court, which had not ruled on the case by the end of 1965.

HAWAII · Information Highlights

Area: 6,424 square miles.
Population: 710,000 (1965 est.).
Chief Cities (1965 est.): Honolulu, the capital (315,000); Kailua-Lanikai (33,000); Hilo (26,200); Wahiawa (18,500); Kaneohe (18,000); Aiea (16,000).
Government: *Chief Officers*—governor, John A. Burns (Democrat); lt. gov. and acting secy. of state, William S. Richardson (D); atty. gen., Bert T. Kobayashi (D); director of finance, Andrew T.F. Ing; supt. of pub. instr., R. Burl Yarberry; chief justice, Wilfred C. Tsukiyama; *Legislature* (convened Feb. 17, 1965)—Senate, 25 members (16 Democrats, 9 Republicans); House of Representatives, 51 members (39 D, 12 R).
Education: *School enrollment* (1964–65)—public elementary, 97,800 pupils (3,221 teachers); public secondary, 67,200 pupils (2,204 teachers); nonpublic schools, 35,200 pupils (1,170 teachers); college and university (fall 1964), 15,968 students. *Public school expenditures* (1964–65)—$62,500,000 ($422 per pupil); average teacher's salary, $6,060.
Public Finance (fiscal year 1965): *Revenues,* $366,128,412 (3.5% sales tax, $36,898,014; motor fuel tax, $17,057,526; federal funds, $58,562,715). *Expenditures,* $348,260,097 (education, $99,706,866; health, welfare, and safety, $59,413,173; roads and highways, $23,681,687). *State debt,* $300,632,951 (June 30, 1965).
Personal Income (1964): $1,807,000,000; average annual income per person, $2,622.
Public Assistance (fiscal year 1964): $14,754,000 (aged, $750,000; dependent children, $4,988,000).
Labor Force (employed persons, fiscal 1965): *Agricultural,* 16,682; *nonagricultural* (wage and salary earners), 233,160 (10.5% manufacturing, 21% trade, 23.6% government). *Unemployed persons* (fiscal 1965)—9,478.
Manufacturing (1963): Value added by manufacture, $254,454,000 (nonelectrical machinery, $3,320,000; food and products, $172,766,000; printing and publishing, $16,725,000; stone, clay, and glass products, $12,204,000).
Agriculture (1964): *Chief crops* (tons)—sugarcane, 10,470,000 (ranks 1st among the states); papayas, 12,300; coffee, 6,750; taro, 4,610; bananas, 4,550; Macadamia nuts, 3,285.
Mining (1964): *Production value,* $19,605,000 (ranks 46th among the states). *Chief minerals* (tons)—pumice, 365,000 (rank, 4th); stone, 5,282,000; sand and gravel, 407,000; lime, 9,000; clays, 3,000.
Fisheries (1964): *Commercial catch,* 12,684,597 pounds ($2,847,790). *Leading species*—skipjack tuna, 9,023,599 pounds ($1,221,698); striped marlin, 501,814 pounds ($131,595); yellowfin tuna, 500,117 pounds ($185,486); goatfish, 292,262 pounds ($103,556).
Transportation: *Motor vehicles* (1965), 231,677; *railroads* (1963), 25 miles; *aircraft* (1964), 283; *airports,* 46.
Communications (1965): *Telephones,* 304,000; *television stations,* 17; *radio stations,* 24; *newspapers,* 7 (daily circulation, 164,861).

Education. While reapportionment may have been the most important issue in the minds of many legislators, pressures from the public and from House Speaker Elmer Cravalho and Senate Ways and Means Chairman Nadao Yoshinaga kept the spotlight on Hawaii's educational needs. The Legislature provided substantial pay increases for teachers and repealed a requirement that teachers be Hawaii residents. More important, the state public school system received a long-overdue reorganization. Educational programs were examined and evaluated to improve both the method of teaching and the subject matter in Hawaii's schools. A study was made of the vocational education program, and a joint research program was initiated by the public schools and the University of Hawaii. By the end of the legislative session, an impressive string of bills relating to education had been approved.

Homestead Program. Political leaders Cravalho and Yoshinaga succeeded in another area—the long-dormant and grossly unsuccessful Hawaiian Homesteading Program, which has been in effect since 1920. This program had consistently failed to raise the general economic and educational level of the homesteaders. Because of this failure, the University of Hawaii conducted a study of the program. The study recommended a change of direction for the program; as a result of this recommendation, large sums of money were provided for educating the homesteaders' children, many of whom are among Hawaii's least successful students.

Appointments. Former U.S. Representative Thomas Gill became head of the Hawaii Office of Economic Opportunity; and Howard Jones, former U.S. ambassador to Indonesia, became chancellor of the East-West Center for Cultural and Technical Interchange.

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HEAD START, Project. See ANTI-POVERTY PROGRAM; EDUCATION.

HEALTH, Public. See PUBLIC HEALTH.

HEALTH INSURANCE. See INSURANCE.

HEARING. See DEAFNESS.

HEART DISEASE

In 1965 the President's Commission on Heart Disease, Cancer, and Stroke, appointed by President Lyndon B. Johnson in early 1964, proposed an elaborate plan for the care of patients with these diseases. (They currently account for 71% of all deaths in the United States.) The plan provides for a national network of centers for patient diagnosis and treatment, and for research and education in these three fields.

Experimental Surgery. At Stanford University, physicians reported that a dog lived for 11 months after his heart had been replaced by the heart of another dog. This is the longest survival period on record for transplants. The doctors attributed the length of the survival to a new method of detecting and halting the onset of the normal process ("immune response") through which the body rejects transplants. Electrocardiograms reveal the start of the rejection (the onset causes a drop in electrical output of the heart muscle), and drugs administered at that time halt the process. Investigators in

Brooklyn, N.Y., noted that puppies lived for more than 43 days after heart transplants, without immunosuppressive therapy.

Researchers at the Metropolitan Hospital in Cleveland, Ohio, experimented with an artificial pacemaker which features a pressure-sensitive crystal and draws its energy directly from the beating action of the heart. This thumb-sized miniature device can be attached inside the chest wall, so that the crystal is slightly bent when the heart contracts. The crystal converts the heart motion into electrical signals that power a generator. This, in turn, sends an electrical pulse into the heart muscle, causing the heart to beat.

To increase the contractile force of a damaged heart, "paired" pacing of the heart was tried. With this method an impulse can be timed to stimulate the heart during the period following a beat, while the muscle is still refractory to stimulation. The impulse delays the next beat, thus slowing the rate and making each heartbeat more effective.

Hypertension. The year 1965 brought forth a new concept in the treatment of hypertension (high blood pressure): electronic stimulation of the carotid sinuses. In an experiment using dogs with induced high blood pressure, intermittent stimulation of the carotid sinuses by an implantable unit effectively lowered and maintained the blood pressure for a long period.

Dr. Jerome W. Conn of the University of Michigan, and his coworkers, theorized that 20% of patients with essential hypertension have a small aldosterone-secreting tumor of the adrenal cortex. Testing of this hypothesis will depend on developing simpler methods to detect hyperaldosteronism.

Coronary Disease. In the intensive coronary care units in many hospitals during 1965, patients suffering from attacks due to occlusion of coronary arteries were monitored continuously by electronic devices. These recorded instantly any abnormalities of the heart beat, alerting doctors to the fact that patients required attention. Immediate treatment of such disorders helped save the lives of the patients.

Dr. Paul A. Owren of University Hospital, Oslo, Norway, reported that a tendency to thrombosis and coronary heart disease in certain population groups may be related to a dietary deficiency of linolenic acid. A good source of the acid is linseed oil. According to Dr. Owren, a daily tablespoon of oil (refined for human consumption) reduced platelet adhesiveness within three days. Such treatment may help prevent thrombosis.

Human Investigative Studies. Doctors at the New Jersey College of Medicine in Jersey City (N.J.) found that alcoholics who consume 6 to 7 two-ounce drinks of whiskey within two hours suffer a 25% drop in the contraction force of their hearts. British physicians reported heart failure and death in chronic alcoholic cases. Such studies reveal that alcoholism may endanger the heart.

The National Naval Medical Center at Bethesda, Md., developed an ultrasonic cardioscope capable of monitoring the heartbeat of human embryos as early as ten weeks after conception. This device emits a sound beam 300 times above the audible range that travels through the mother's abdominal wall and amniotic fluid. A beam striking the fetal heart relays an echo to a hand-held transmitter. Then electronic equipment converts the echo into audible frequencies on tape. The taped message informs the doctor whether the baby has congenital heart ailment (endocardial fibroelastosis).

New Drugs. Two diuretic agents, Ethacrynic acid and Furesomid, as yet not commercially available in the United States, were reported to be effective in edema due to heart failure.

Since potassium salts in coated tablets may induce ulcers, obstruction, or perforation of the small intestine, it was suggested that the drug be given in liquid form, if potassium therapy is indicated.

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HEATH, Edward. See biographical sketch under GREAT BRITAIN.

HIGHWAYS

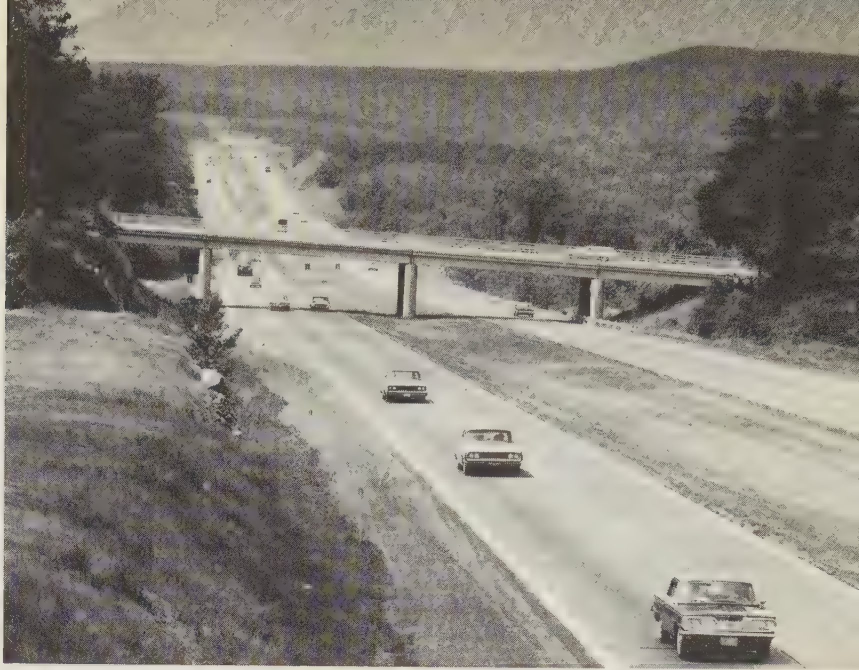
Expenditures of federal, state, and local government for highways, streets, and roads in the United States reached a new high of an estimated $14.2 billion in 1965. This total was distributed as follows: maintenance, $3.20 billion; capital outlay, $8.54 billion, including $6.67 billion for new construction and for improvement of existing roads and streets, $722 million for preliminary engineering and planning, and $1.15 billion for right-of-way purchase; and administration, policing and safety, and debt, $2.41 billion. The capital outlay involved expenditure of $7.08 billion on state-administered principal highways, secondary roads, and arterial streets, and of $1.46 billion on local roads and streets.

Major sources of revenue for highways in 1965 were: federal road-user taxes, $3.70 billion; state road-user taxes, $6.57 billion; local government property taxes and general fund appropriations, $1.82 billion; and proceeds of state and local bond issues, $1.31 billion.

In 1965 the United States had a total of 3,620,000 miles of roads and streets. Motor-vehicle registrations in 1965 were expected to reach 90 million, 4.6% above the preceding year. Total highway travel in 1965 was estimated at 870 billion vehicle-miles, a gain of 3.6% over 1963.

Federal-aid Programs. Federal aid to the states for highway improvement is administered by the Bureau of Public Roads, U.S. Department of Commerce. The aid program began modestly in 1916, grew gradually during the ensuing years, and was greatly expanded in 1956. The program is cooperative, the states doing the actual work and retaining responsibility for the roads and their maintenance. Funds for the federal-aid highway program are disbursed from a special highway trust fund in the U.S. Treasury. The money for this fund comes wholly from earmarked federal highway-user taxes, the principal one being the motor-fuel tax. Net tax revenue of the trust fund in the fiscal year 1965 was $3.66 billion.

A major objective of the federal-aid program is the completion by 1972 of the National System of Interstate and Defense Highways. This 41,000-mile network of controlled-access superhighways will serve practically every city of 50,000 population or more, and many smaller towns. It is designed to handle adequately the traffic anticipated 20 years beyond the design period. By 1975 some 116 million motor vehicles will be traveling more than a trillion miles a year in the United States, and the Interstate System will carry 20% of this total. It is expected that the safety features of the completed system will save upwards of 8,000 lives a year.



SAFETY AND BEAUTY are major aims of engineers who design highways. Unobstructed vision and uncluttered roadsides are the results of good planning. The view of the Catskills from the Thomas E. Dewey Thruway in New York State contrasts with the jumble of signs found along many American roads.

NEW YORK STATE THRUWAY AUTHORITY

Federal funds are being used to pay for 90% of the cost of the Interstate System. A new estimate of the cost of building the Interstate System, made in January, set the total cost at $46.8 billion, an increase of $5.8 billion over estimates made in 1958 and 1961. The increased cost results largely from improved service, safety, and durability features, and rising unit costs.

In the older, continuing so-called "ABC" federal-aid program for the improvement of primary highways, secondary roads, and arterial streets, federal funds are matched by the states. The networks eligible for federal aid total 901,120 miles, of which 267,774 miles are in the federal-aid primary system of main rural roads and major streets (including the Interstate System mileage), and 633,346 miles are in the federal-aid secondary system of farm-to-market and feeder roads. Urban portions of these systems total 47,451 miles.

Federal-aid funds authorized by Congress are apportioned among the states according to methods prescribed by law. This is done well in advance so that the states can plan how to use aid funds. The table on page 334 shows the apportionment of funds for the fiscal year 1967. The $4 billion total includes $3 billion for the Interstate System and $1 billion for the regular ABC federal-aid program.

Miles of Highway Completed. By June 30, 1965, some 19,396 miles of the Interstate System were open to traffic. This included 14,220 miles completed to the ultimate standards for future traffic needs, and 2,851 miles improved at least to capability for handling current traffic but needing further work to reach ultimate standards. Some 2,325 miles of toll roads, bridges, and tunnels are included in the system, as permitted by law, but no federal aid is spent on such facilities.

During the fiscal year 1965, 2,433 miles of the Interstate System were opened to traffic. Work completed on the system during the year cost $2.71 billion, of which $2.41 billion was federal aid. Construction was under way at the end of the fiscal year on 6,135 miles, and preliminary planning and right-of-way acquisition were in progress on another 11,820 miles, at a cost of $9.8 billion.

In the ABC federal-aid program, improvement projects were completed during the fiscal year on 14,702 miles of roads and streets at a cost of $1.86

WIDE WORLD

TWA JETS
CHICAGO
TIMES

BILLBOARDS crowd each other and obscure the view on a freeway near Los Angeles, California. Legislation enacted by Congress in 1965 will restrict billboards and junkyards along roads that are built with federal assistance.

billion, of which $977 million was federal aid. At the end of the year, work was under way on 20,962 miles at an estimated cost of $4 billion.

Safety and Beautification. Strong interest developed during 1964 and 1965 in highway safety and beautification. As part of the federal-aid program, an intensive effort was made to eliminate known hazards from the highways. Greater emphasis was placed on highway beautification, both in road location and design and in roadside landscaping. President Johnson recommended and Congress enacted legislation relating to billboard and junkyard control and scenic road development on the federal-aid highway systems. (See CONSERVATION.)

In addition to administering the federal aid program, the Bureau of Public Roads builds roads in national parks and forests and on other public lands, and administers disaster-repair and defense-access road programs. During the fiscal year 1965, projects were completed on 2,115 miles of such roads at a cost of $108 million in federal funds.

Assistance to Other Countries. Since 1930, the United States, through the Bureau of Public Roads, has aided the six Central American republics in building the 3,142-mile Inter-American Highway from Laredo, Texas, to Panama City, Panama. The Bureau continued to support improvement of the road at a number of locations in 1965. It also initiated a survey for a route through the Darien Gap jungle of Panama and Colombia.

APPORTIONMENT OF FEDERAL-AID HIGHWAY FUNDS AUTHORIZED FOR THE FISCAL YEAR 1967

Political unit	Primary, secondary, and urban highways	Interstate system	Total
Alabama	$18,869,625	$64,300,800	$83,170,425
Alaska	40,258,116	....	40,258,116
Arizona	12,340,138	45,743,400	58,083,538
Arkansas	13,196,211	23,255,850	36,452,061
California	58,716,830	289,205,850	347,922,680
Colorado	15,289,193	35,607,750	50,896,943
Connecticut	8,957,497	62,675,550	71,633,047
Delaware	4,267,670	5,319,000	9,586,670
Florida	21,149,697	65,364,600	86,514,297
Georgia	22,670,862	42,670,200	65,341,062
Hawaii	4,621,667	25,472,100	30,093,767
Idaho	9,019,144	17,464,050	26,483,194
Illinois	41,740,545	169,557,900	211,298,445
Indiana	22,526,566	64,950,900	87,477,466
Iowa	20,678,726	35,903,250	56,581,976
Kansas	19,604,755	22,073,850	41,678,605
Kentucky	16,282,354	61,759,500	78,041,854
Louisiana	15,799,565	74,997,900	90,797,465
Maine	6,696,962	13,179,300	19,876,262
Maryland	11,448,760	48,048,300	59,497,060
Massachusetts	16,267,746	64,419,000	80,686,746
Michigan	33,540,932	88,177,200	121,718,132
Minnesota	23,838,968	68,733,300	92,572,268
Mississippi	14,962,504	32,593,650	47,556,154
Missouri	26,259,078	71,865,600	98,124,678
Montana	14,348,859	30,259,200	44,608,059
Nebraska	14,887,842	16,813,950	31,701,792
Nevada	8,677,027	18,616,500	27,293,527
New Hampshire	4,355,045	14,302,200	18,657,245
New Jersey	18,755,313	78,100,650	96,855,963
New Mexico	12,499,348	35,519,100	48,018,448
New York	57,176,347	151,030,050	208,206,397
North Carolina	23,349,831	27,097,350	50,447,181
North Dakota	10,682,850	13,740,750	24,423,600
Ohio	38,295,769	182,973,600	221,269,369
Oklahoma	18,198,804	31,116,150	49,314,954
Oregon	13,795,761	52,037,550	65,833,311
Pennsylvania	42,198,208	143,140,200	185,338,408
Rhode Island	5,196,881	16,488,900	21,685,781
South Carolina	12,542,239	19,059,750	31,601,989
South Dakota	11,336,521	26,772,300	38,108,821
Tennessee	19,894,254	64,448,550	84,342,804
Texas	59,133,499	148,784,250	207,917,749
Utah	8,981,991	45,181,950	54,163,941
Vermont	3,961,535	21,157,800	25,119,335
Virginia	19,294,874	91,752,750	111,047,624
Washington	15,444,427	71,836,050	87,280,477
West Virginia	9,861,744	67,994,550	77,856,294
Wisconsin	22,541,101	24,733,350	47,274,451
Wyoming	8,720,882	29,165,850	37,886,732
Dist of Columbia	5,263,099	39,537,900	44,800,999
Puerto Rico	6,601,838	....	6,601,838

Since World War II, the Bureau of Public Roads has assisted many countries to establish highway departments and highway programs. Such work is financed by the U.S. Agency for International Development (AID) or by loans from the Export-Import Bank of Washington or the World Bank. In 1965 the bureau had missions in 20 countries.

E.A. STROMBERG
Special Assistant to the Federal Highway Administrator, Bureau of Public Roads
U.S. Department of Commerce

HO CHI MINH. See biographical sketch under VIETNAM.

HOCKEY. See SPORTS.

HOLLAND. See NETHERLANDS.

HOME ECONOMICS. See Agriculture—AGRICULTURAL RESEARCH.

HOME FURNISHINGS. See INTERIOR DECORATION.

HONDURAS

N. AMERICA
S. AMERICA

The impressive 1964 record of economic development in Honduras continued in 1965 as the government relaxed controls over business, and the Central American Common Market (CACM) stimulated private initiative and enterprise. The political situation was stabilized under constitutional government, and free elections were held.

Economy. President Oswaldo López Arellano announced that the gross national product (GNP) totaled $468 million in 1964, exceeding that of 1963—also a favorable year—by 6.5%. The 3.5% per-capita increase was by far the largest gain attained in recent years. President López Arellano forecast a 5% increase in GNP in 1965.

Banana exports for January 1965 were 135% higher than in January 1964. The increase was due mainly to the expansion program of the United Fruit Company and associated producers. Cotton production rose by 59% over the 1964 output. Coffee shipments dropped 17%, however, because of poor weather and depressed prices. Beef production was good, and 2.9 million pounds of chilled beef were exported to the United States in the first quarter of 1965—a 50% increase over the same period in 1964. The increase in exports was due largely to new slaughtering and packing plants and the renovation of old facilities.

Highway construction is given high priority every year in the Honduran budget. Loans totaling $19.6 million, mostly from three international financial agencies, were approved in 1965 for the $25 million Northern Highway project, which is scheduled for completion by 1970. The new highway will cut the transportation time between Tegucigalpa and San Pedro Sula almost in half.

The United States provided technical assistance of $1.9 million on a grant basis in the fiscal year

1965, with $2 million more planned for 1966. In October the Agency for International Development authorized a loan of $5.2 million to assist in the construction of 374 miles of rural farm-to-market access roads.

Elections. Elections were held on February 16 to select 64 members of a constituent assembly that will draft a new constitution and name a president. The Nationalist party, led by Air Force Col. Oswaldo López Arellano, won 35 seats, as against 29 seats for the Liberal party, led by former President Ramón Villeda Morales. Although both parties agreed that the elections were conducted without fraud in the two largest cities, Tegucigalpa and San Pedro Sula, the Liberal Party charged election irregularities in rural areas of the country.

The assembly convened on March 15 and elected Col. López Arellano as president for a six-year term. López Arellano attempted to conciliate the defeated Liberals by offering them positions in the government. The Liberals, however, remained disaffected, and attempted unsuccessfully to stage a general strike in July.

Actions of the New Government. The government embarked on an ambitious 4-year development plan in which both foreign and domestic private enterprise will play a role. It announced that foreign and domestic capital investment would be effectively protected, and that private industry would be offered incentives by the government.

Guerrillas and terrorists were smuggled into Honduras in 1965, mainly by the Central American guerrilla command in Guatemala, but the counter-insurgency and civic action programs of the Honduran armed forces adequately coped with the threat.

Early in the year, Honduras contributed a contingent of 250 troops to the Inter-American Peace Force which was sent to the Dominican Republic by the Organization of American States to help maintain a cease-fire in that country.

Although President López Arellano surrounded himself with able men and governed without repression, the Freedom of the Press Committee of the Inter-American Press Association declared in October that freedom of the press was lacking in Honduras.

William S. Stokes
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Claremont Men's College

HONDURAS · Information Highlights

Area: 43,277 square miles.
Population: 2,163,000 (June 30, 1965, est.).
Chief Cities (1961 census): Tegucigalpa, the capital, 134,075; San Pedro Sula, 58,632; La Ceiba, 24,863; Puerto Cortés, 17,048.
Government: *President*—Col. Oswaldo López Arellano (assumed power after coup d'état, Oct. 3, 1963; elected president by National Assembly, March 23, 1965). *Constituent Assembly*—64 members; party seating (1965)—National Party, 35; Liberal Party, 29.
Religious Faiths: Roman Catholics, 97% of population; others, 3%.
Education: *Literacy rate* (1961)—45% of population aged 15 and over. *Total school enrollment* (1963)—279,649 (primary, 259,112; secondary, 14,686; teacher-training, 1,864; technical, 1,912; higher, 2,075).
Finance (1964): *Revenues,* $56,100,000; *expenditures,* $56,100,000; *monetary unit,* lempira (2 lempiras equal U.S.$1).
Gross National Product (1964): $468,000,000.
National Income (1964): $402,000,000; average annual income per person, $192.
Economic Indexes (1964): *Agricultural production,* 135 (1956–57=100); *cost of living,* 110 (1958=100).
Manufacturing (metric tons): Cement (1964), 73,000; sugar (1964), 34,000; meat (1963), 19,000; wheat flour (1963), 15,000; cheese (1962), 11,000; beer (1963), 151,000 hectoliters; lumber (1962), 474,000 cubic meters.
Crops (metric tons, 1963–64 crop year): Bananas, 885,000; maize, 302,000; sorghum, 59,000; dry beans, 44,000; coffee (1964–65), 25,200; cottonseed (1964–65), 19,000; cassava, 16,000.
Minerals (metric tons, 1964): Silver, 3,220,371 troy ounces (ranks 12th among world producers); salt, 10,000; zinc, 6,993; lead, 454; cadmium, 34; gold, 3,319 troy ounces (U.S. imports).
Foreign Trade (1964): *Exports,* $94,750,000 (chief exports: bananas, $34,200,000; coffee, $16,700,000; silver, $3,050,000); *imports,* $101,900,000 (chief imports, 1963: nonelectrical machinery, $10,920,000; electrical machinery, $7,149,000; petroleum products, $6,998,000). *Chief trading partners* (1963): U.S. (took 60% of exports, supplied 48% of imports); El Salvador (took 11% of exports, supplied 8% of imports); West Germany (took 10% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 2,175 miles (237 paved); *motor vehicles* (1964), 15,500 (automobiles, 8,000); *railways* (1963), 716 miles; *merchant vessels* (1964), 16 (63,000 gross registered tons; *principal airports,* San Pedro Sula, Tegucigalpa.
Communications: *Telephones* (1964): 9,266; *television stations* (1964), 3; *television sets* (1964), 6,500; *radios* (1961), 125,000; *newspapers* (1963), 6.

HONDURAS, British. See British Honduras.

HONG KONG

Hong Kong, British crown colony and international entrepôt, enjoyed a year of flourishing business in 1965. Imports from Communist China, Hong Kong's major supplier, and exports to the United States, its biggest buyer, reached record levels. A brief run on Chinese-controlled banks in February caused no major financial crisis.

Trade and Industry. Hong Kong's imports from China, which reached a record $500 million in 1964, were expected to total $625 million by the end of 1965. About 30% of these imports were resold to other nations.

The colony's other chief trading partner, the United States, increased its imports from Hong Kong by 27% in 1964. Clothing was the largest single item in the $217 million total.

Both the United States and China increased investments in Hong Kong's trade and industry in 1965. A new electric power plant was being constructed in the colony as a joint venture of Esso Standard Eastern, Inc., and the China Light and Power Company, Ltd. The plant, to cost $90 million, will supply 720,000 kilowatts of electricity.

HONG KONG · Information Highlights

Area: 1,126 square miles (land only, 398 square miles).
Population: 3,804,000 (July 1, 1965 est.).
Chief City (1961 census): Victoria, the capital, 633,138.
Government: *Sovereign*—Queen Elizabeth II; *Governor*—Sir David Trench. Executive Council, 12 members; Legislative Council, 17 members.
Education: *Literacy rate* (1961)—71% of population aged 15 and over. *Total school enrollment* (1962)—699,498 (primary, 556,628; secondary, 125,459; technical, 8,306; higher, 9,105).
Finance (1964–65 est.): *Revenues,* $240,000,000; *expenditures,* $259,000,000; *monetary unit,* Hong Kong dollar (5.77 dollars equal U.S.$1 at the official rate).
Economic Index: *Cost of living* 1964, 109 (1958=100).
Manufacturing (metric tons): Cement (1964), 215,000; cotton yarn (1964), 118,320; beer (1963), 17,790; coke and breeze, 12,700; wool yarn (1963), 5,100.
Chief Crops: Rice, fruits, vegetables.
Minerals (metric tons, 1964): Iron ore, 116,000; kaolin, 5,124; feldspar, 1,581; graphite, 721.
Foreign Trade (1964): *Exports,* $1,012,000,000 (chief exports, 1963; clothing, $242,000,000; cotton fabrics, $83,000,000; toys and games, $37,000,000; electrical machinery and appliances, $30,000,000); *imports,* $1,496,000,000 (chief imports, 1963: machinery, $119,000,000; raw cotton, $69,000,000; rice, $55,000,000). *Chief trading partners* (1963): U.S. (took 20% of exports, supplied 11% of imports); Britain (took 18% of exports, supplied 12% of imports); Japan (took 6% of exports, supplied 17% of imports); Communist China (took 1% of exports, supplied 20% of imports).
Transportation: *Roads* (1964), 543 miles (paved); *motor vehicles* (1964), 69,593 (automobiles, 53,156); *railways* (1963), 22 miles; *principal airport,* Kai Tak, on Kowloon Bay.
Communications: *Telephones* (1964): 178,285; *television stations* (1964), 1; *television sets* (1964), 35,000; *radios* (1962), 189,000; *newspapers* (1962), 44 (daily circulation, 772,000).

More than 370,000 tourists visited the colony in 1964. They spent an estimated $130 million.

The colony's labor force, which numbers about 350,000, enjoyed virtually full employment in 1965. There was a slight shortage of workers between 18 and 25 years old, who are preferred by many of Hong Kong's industries.

Bank Run. A brief but heavy run on Chinese-controlled banks in Hong Kong took place in early February. The run began when several clients of the Chinese-controlled Ming Tak bank reported that U.S. dollar checks issued by the bank had not been honored in the United States. In the following days, many depositors withdrew their money from the 14 Chinese banks in Hong Kong. To ease the shortage of local currency caused by the bank run, the government of Hong Kong requested a supply of sterling bank notes from the Bank of England. Sir David Trench, governor of the colony, went on the air on February 9 to urge that money withdrawn be returned. The banking situation returned to normal by the end of the year.

Red Chinese Refugees. The influx of refugees from China, which had fallen to insignificant numbers in 1964, rose in the spring of 1965. The number of refugees entering Hong Kong in May was estimated to be 1,000. The chief reason the refugees fled China was reported to be their fear of being drafted into military service.

Relations With Peking. The mutual benefits of flourishing business in Hong Kong continued to maintain friendly relations between China's Communist government in Peking and the British government in Hong Kong. Soviet jibes at Peking's tolerance of the British colony on its coast have been ignored in China. One important reason for this is that China's trade and investment in Hong Kong account for about 60% of its foreign exchange earnings from business with the non-Communist world. The colony buys 20 times as much from China (including its daily water and food), as it sells there.

HORCE RACING. See SPORTS.

HORSE SHOWS. See SPORTS.

HORTICULTURE. See GARDENING AND HORTICULTURE.

HOSPITALS

There were 7,127 hospitals of all types in the United States in 1964—a decrease of 0.2% from 1963. There were also fewer hospital beds available in 1964—1,696,039, representing a decrease of 0.3% from 1963. The number of patients admitted to hospitals during 1964 rose to 28,266,239, up 2.8% from the 1963 figure. From 1963 to 1964 the average daily hospital census declined by 0.6%, to 1,420,918. The result was a decline in the average occupancy for all hospitals, from 84% in 1963 to 83.8% in 1964.

The average cost for a day's care in voluntary, short-term hospitals during 1964 was a record $41.58, or almost twice the figure for 1954. This sharp increase was due to the devaluation of the dollar, advances in medicine and technology, demands for more and highly trained technicians, and increased wages of hospital personnel.

Health Care for the Aged. In July 1965 the Social Security Act was amended by Congress to provide health insurance coverage under Medicare for all persons over 65. The hospital portion of the program will pay part of the charges for room, drugs, supplies, and other services customarily included in hospitalization. The program was estimated to cover more than 16 million persons at a cost to the federal government of $2.5 billion for the first year. An optional medical plan to pay most of a patient's doctor bills while in the hospital requires small monthly contributions by the subscribers. (See MEDICARE; SOCIAL SECURITY.)

HOSPITAL STATISTICS

Category	All hospitals	Voluntary, short-term hospitals
Number of hospitals:		
1954	6,970	5,212
1964	7,127	5,712
Number of beds:		
1954	1,577,961	553,068
1964	1,696,039	720,810
Number of admissions:		
1954	20,345,431	18,391,675
1964	28,266,239	25,987,263
Average daily census:		
1954	1,342,508	392,969
1964	1,420,918	550,062
Percentage of occupancy:		
1954	85.1	71.1
1964	83.8	76.3
Number of births:		
1954	3,342,599	3,200,699
1964	3,729,382	3,568,659
Number of full-time personnel:[1]		
1954	1,245,669	777,215
1964	1,886,839	1,332,714
Full-time personnel per 100 patients:[1]		
1954	93	198
1964	133	242
Payroll expense:		
1954	$3,344,416,000	$1,894,987,000
1964	7,974,623,000	5,150,669,000
Payroll expense per patient day:		
1954	$ 6.83	$13.21
1964	15.38	25.65
Total expense:		
1954	$ 5,229,040,000	$3,120,598,000
1964	12,030,994,000	8,349,223,000
Total expense per patient day:		
1954	$10.67	$21.76
1964	23.20	41.58

[1] Includes full-time equivalents of part-time personnel, but excludes residents, interns, and students. (Source: *Hospitals*, American Hospital Association Journal, August 1965.)

Data Processing. Currently, 7% of all hospitals have some form of automatic or electronic data-processing system. The smaller hospitals have utilized business-office computer applications, while the larger institutions also have engaged in clinical and research applications.

Utilization and Control. Hospital medical staff utilization committees have been developed extensively to maintain the lowest cost for inpatient hospital care consistent with a high quality of medical care. The success of this form of medical audit indicates that similar action should be taken in the areas of medical science.

Regional Planning. The McCloskey law, the first law to enforce regional planning and control of hospital construction, was passed by the State of New York. Such planning provides for the development of hospitals by need, the avoidance of duplicating facilities, the conservation of available health funds, and the better utilization of existing facilities.

Disaster Hospitals. The U.S. Department of Health, Education, and Welfare announced in December that it had shipped its first emergency "canned hospitals" —eight to Puerto Rico and two to Hawaii. These 200-bed hospitals contain sufficient supplies and equipment to operate for 30 days without resupply. The hospitals are designed to be set up in times of emergency to replace local facilities that have been destroyed or to expand existing facilities. They can be set up in less than 12 hours.

JAMES A. HAMILTON
Hospital Consultant and Director
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HOTELS AND MOTELS

Hotel room occupancy in the United States in the first nine months of 1965 averaged 62%, as compared with 61% for the same period in 1964. The increase marked the second consecutive year in which occupancy had registered a slight gain. However, the hotel industry's gain lagged far behind that of the general economy in 1965. Industry sources attributed the slight advance in hotel occupancy partly to the record number of American travelers, the tourist attractions at the New York World's Fair, and the rise in the number of overseas travelers visiting the United States. Occupancy of New York City hotels and motels for the first nine months of the year rose from 65.7% in 1963, before the fair opened, to 74.9% in 1964 and then dipped slightly, to 73.7% in 1965.

New Hotels. Major new hotels completed in the United States in 1965 were the 1,200-room Washington Hilton, Washington, D.C.; the $23.5 million 1,012-room Sheraton-Boston, Boston, Mass.; the $12 million, 154-room Mauna Kea Beach Hotel, Hawaii; the $12 million, 423-room Pontchartrain Hotel, Detroit, Mich.; and the $10 million, 275-room Del Webb's Towne House (a combination office building and hotel), Phoenix, Ariz.

New hotels opening outside the United States in 1965 included the 1,200-room Otani, Tokyo; the 428-room Tel Aviv Hilton, Tel Aviv; the 245-room Tunis Hilton, Tunis; the 274-room Orly Hilton, Paris; the 344-room Oberoi Intercontinental, New Delhi; the 300-room Hannover Intercontinental, Hannover, West Germany; and the 101-room Hotel Pago Intercontinental, American Samoa.

New Motels. Among the larger motor hotels completed in the United States in 1965 were the $5 million, 355-room Holiday Inn at Los Angeles International Airport; the $3 million, 150-room Portofino Inn, Redondo Beach, Calif.; the $3 million 232-room Houstonaire Motor Inn, Houston, Texas; the 170-room $2 million Holiday Inn, Phoenix, Ariz.; the $2 million 200-room Ramada Inn, Topeka, Kan.; the $2 million, 119-room Howard Johnson's Motor Lodge, Denver, Colo.; and the $2 million, 102-room Congress Inn, Baltimore, Md.

Lodging Statistics. The 1963 Census of Business (published in 1965) lists a total of 64,276 hotels and motels and motor hotels in the United States, with 2,447,200 rooms. Their receipts totaled $4.6 billion, up from $3.6 billion reported in the 1958 census. Since the 1958 census, the number of hotels declined from 29,203 to 22,692, while the number of motels increased from 41,332 to 41,584. According to the census, the number of establishments and guest rooms in the nation's lodging industry has increased by about 55% since 1939, with the advances due entirely to motel construction.

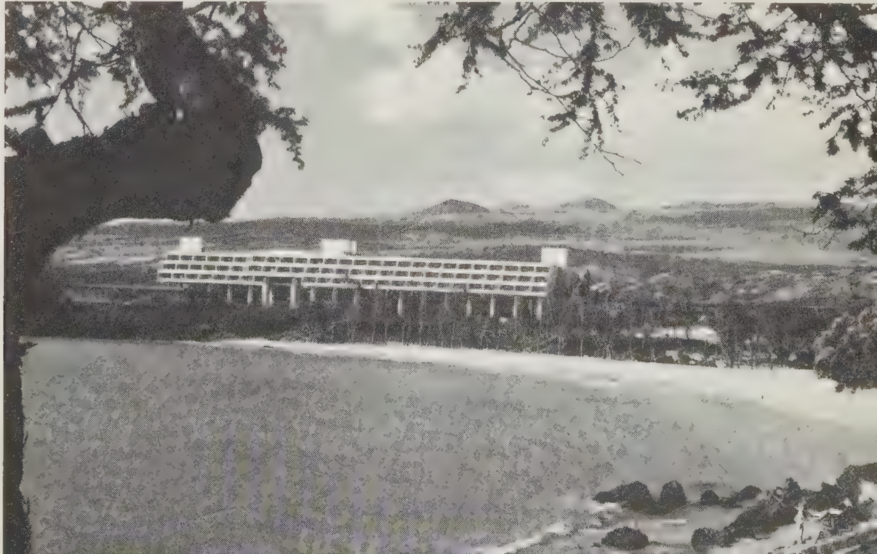
In 1965 the American Hotel & Motel Association's *Directory of Hotel and Motel Systems* listed 172 lodging chains, with a total of 3,543 hotels and motels—an increase of 802 over 1964.

ALBERT E. KUDRLE
Director of Information
American Hotel & Motel Association

DEL WEBB'S TOWNE HOUSE

DEL WEBB'S TOWNE HOUSE, a new hotel and office building combination in Phoenix, Ariz., was opened in 1965. The 275-room structure was built at a cost of $10 million.

MAUNA KEA BEACH HOTEL



MAUNA KEA BEACH HOTEL, located on the northwest coast of the island of Hawaii, opened in July 1965. The stepped-back tier construction used in building the $12 million hotel provides the 154 guest rooms with open lanais, or lounging terraces.

HOUSING

Private housing construction in the United States continued at a relatively high level in 1964 and the first half of 1965. However, there was a slight downward trend, and total starts in 1965 probably were somewhat lower than in 1964. Mortgage foreclosures remained relatively high, but the sharp upward movement of recent years appeared to have leveled off. A number of localities experienced overbuilding and market softness. Mortgage funds continued plentiful, but interest rates increased slightly late in the year.

Two housing laws of far-reaching importance were passed by Congress during 1965. The Housing and Urban Development Act of 1965 represented the most comprehensive and significant extension of federal programs to assist housing and urban renewal since the landmark Housing Act of 1949. In September, Congress created a new cabinet-level Department of Housing and Urban Development to administer the provisions of these acts and the related federal programs previously under the jurisdiction of the Housing and Home Finance Agency (HHFA).

The Housing and Urban Development Act. This act, signed by President Johnson on August 10, extended the major programs of the HHFA for four years. It also provided for the creation of a number of new authorities to administer programs aimed at housing and urban improvement.

The act's most discussed feature was a new program of federal rent-supplement payments to help provide better living conditions for low-income families. Under the rent-supplement provisions, housing financed by the Federal Housing Administration (FHA) and built or rehabilitated by nonprofit, limited-dividend, and cooperative organizations for the use of low-income families will be eligible for federal rent-supplement payments. These payments are to cover the difference between the rent required for living units and an amount equal to 25% of the income of eligible low-income tenants. To be eligible for rent-supplement payments, persons must have incomes within the ceilings established by the low-rent public housing law, and either be elderly, physically handicapped, displaced by governmental action, or living in substandard housing units, or else be occupants of a dwelling damaged or destroyed by a natural disaster. Getting the program under way was delayed, however, when Congress failed to provide contract funds before adjourning in October.

The new act continued the FHA's special below-market-interest-rate mortgage insurance program for low- and moderate-income families until Oct. 1, 1969, and reduced to 3% the interest rate for mortgages insured under this program. The FHA was also authorized to insure mortgages that finance the cost of land development for residential and related uses. Such mortgages cannot exceed $10 million.

Another provision of the act was the authorization of federal subsidies for approximately 240,000 additional units of low-rent public housing over the next four years. The act encouraged the use of the private housing supply for low-rent public housing by authorizing the purchase, rehabilitation, or leasing of existing private housing for this purpose. The authorization for federal direct housing loans for the elderly and handicapped was increased from $350 million to $500 million, with the interest rate reduced from 4% to 3%.

The act increased the authority for federal grants for urban renewal programs by $2.9 billion over a four-year period. Federal grants also were authorized for assisting cities and counties to carry out programs of code enforcement in deteriorated or deteriorating areas. Another provision was the authorizing of grants up to $1,500 each for low-income homeowners in urban renewal and code-enforcement areas to cover repairs for their homes.

The act authorized federal grants to local public bodies to help construct basic public water and sewer facilities. It provided assistance to build neighborhood and community centers, youth centers, health stations, and other facilities. It permitted acquisition and development of land for open-space uses, both in outlying areas and in built-up portions of urban areas. The act also made federal funds available for urban beautification and improvement, and for the acquisition of sites to be used to construct public works or facilities.

Department of Housing and Urban Development. This department is designed to help administer and coordinate federal programs for providing housing, for the development of communities, and for solving problems that arise in connection with urban, community, suburban, and metropolitan development. It will collaborate with state, county, town, and other

PIX

HUGE APARTMENT HOUSES are characteristic of urban development. Those shown at left are part of New Haven's extensive redevelopment program, and now occupy what used to be one of the city's worst slum areas.

local and private agencies. The new department absorbs all the functions and programs previously assigned to the HHFA. The Federal National Mortgage Association was transferred to the new department as a corporate entity.

Federal Financing. Federally assisted urban renewal activity continued at a high level in 1965. Federal funds for this purpose amounted to $607.4 million in 1964, and $166 million for the first quarter of 1965. At the end of the latter period, total grants made since the beginning of the program in 1949 amounted to about $4.5 billion, and 1,764 urban-renewal projects and related programs had received federal financial support. Federally assisted low-rent public housing units completed, under construction, or planned, increased from 682,307 at the end of 1963 to 715,188 in April 1965.

In 1964 and the first quarter of 1965 the FHA received applications under its program for profit and nonprofit housing projects for the elderly that would provide over 5,000 living units. The HHFA's program of direct loans to nonprofit corporations for such housing received applications for 6,134 units in 1964, and for 1,090 in the first quarter of 1965. At the end of the first quarter of 1965, nearly 100,000 public housing units for the elderly had been put under program reservations, and 11,271 units were completed in 1964 and the first quarter of 1965.

Volume of Residential Construction. By June 1965 the seasonally adjusted annual rate of new private residential construction was $26.8 billion, compared with $26.5 billion in 1964. The estimated number of new permanent, nonfarm, private housing units started in the United States was 1,530,400 in 1964, or slightly below the 1,581,700 units in 1963. In the early part of 1965, housing starts continued at a somewhat reduced level—283,000 for the first quarter of 1965, as against 326,300 for the same period in 1964. This decline was attributable to a reduction in apartment construction. Preliminary data for the first seven months of 1965 showed that multifamily activity had declined by 12%, and that virtually no change had occurred in single-family home-building activity.

Of the privately owned nonfarm housing units started in the first quarter of 1965, 81.5% were financed through conventional loans without direct government assistance, 14.5% through FHA-insured loans, and 4.1% through loans guaranteed by the Veterans Administration. Comparable figures for all of 1964 were 82.8%, 13.4%, and 3.9%, respectively.

Construction Costs. The cost of the average nonfarm single-family dwelling unit has climbed steadily. In 1959 the average was $13,425, but by 1964 it had risen to $15,575, and early in 1965 it went well above $16,000. Both the E.H. Boeckh residential cost index and the Department of Commerce index of general construction costs continued to climb. In 1963 the Boeckh index (1957–59=100) was 108.5; in December 1964 it was 111.6, and by March 1965 it was 113.5. However, the rate of increase in residential construction costs has been considerably less in recent years than it was between the end of World War II and 1957. The higher cost is due in part to the fact that houses are larger and better constructed.

Market Conditions. Funds available for mortgage financing remained plentiful during the latter part of 1964 and the first six months of 1965, as they have been since 1962. Interest rates on mortgage loans remained remarkably stable during the same period, as did the prices at which lenders were willing to purchase fixed-interest FHA-insured and VA-guaranteed loans. FHA reports show that the average conventional mortgage interest rate for new homes continued steady at 5.8%. Prices paid for FHA-insured 5.25% mortgages, with 25-year terms and 10% down payments, remained steady at $98.5 per $100 of loan throughout 1964; from January through August 1965 the comparable price was $98.6. However, during the latter part of 1965 the money market became somewhat tighter. This led to a slight pressure upward on mortgage interest rates.

Vacancy rates in homes and apartments in the United States have risen steadily in recent years. The Bureau of the Census estimated the average vacancy rate at 7.7% for the first quarter of 1965. This rate was considerably higher than the 5.6% rate for the first quarter of 1956, but not so high as the 8.0% rate for the first quarter of 1961. The bureau's vacancy rates for sales housing are much lower. The figure for the first quarter of 1965 was 1.5%, as compared with 1.3% for the same period in 1964. However, the comparable figure for the first quarter of 1957 was 0.8%.

In recent years mortgage foreclosures have risen more sharply than vacancies. Based on Federal Home Loan Bank Board figures, the rate of foreclosures per 1,000 mortgaged homes was 1.96 in 1957. In 1960 there were 2.65 foreclosures per 1,000 mortgaged homes, and by 1962 the figure had risen to 4.12. However, figures available for 1964 and the early part of 1965 indicated that the rate of foreclosures has leveled off. The board reported the number of nonfarm foreclosures in 1964 as 108,620, averaging between 26,000 and 28,000 per quarter during that year. For the first quarter of 1965 the same report showed 27,859 foreclosures.

M. Carter McFarland
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Federal Housing Administration

HOUSTON

Houston, the seventh largest city in the United States and the largest city in Texas (1965 est.: city, 1,100,000; metropolitan area, 1,470,000), opened the Harris County Domed Stadium and held municipal elections in 1965. The $35 million, air-conditioned stadium became the home of the Houston Astros professional baseball team and the University of Houston football team. In the municipal elections in late December, voters approved the creation of the Harris County Hospital District and reelected incumbent Mayor Louis Welch and all incumbent councilmen to two-year terms.

New Stadium. An exhibition game between the Houston Astros and the New York Yankees opened the so-called Houston Astrodome on April 9. President Lyndon Johnson was among the almost 50,000 spectators. Glaring light coming through the translucent plastic dome troubled players at the first daytime games, but the problem was later corrected by painting the plastic dome.

Municipal Elections. Considerable excitement in elections in December was generated by the question of financing the Ben Taub and Jeff Davis public hospitals through the creation of the Harris County Hospital District. The proposal for the new district, which had been rejected at four past elections and was a subject of considerable dispute between the city and the county, finally won the voters' approval in 1965.

Reapportionment. The state legislative and federal congressional districts were reapportioned in 1965, giving the Houston-Harris County area increased representation in the state and federal governments. The area was assigned a third congressional seat, three new state senators, and a total of 19 state representatives. (See also TEXAS.)

School Integration. A plan to speed up desegregation of public schools was announced by the Houston Independent School District, with full integration scheduled for the fall of 1967. Rice University admitted its first Negro student in 1965.

Newspaper Sale. The Houston *Chronicle*, the city's evening newspaper, was sold in December by Houston Endowment Incorporated to multimillionaire oilman John Mecom. Included in the $85 million sale was the Rice Hotel and other downtown properties.

Construction. The $150 million Manned Spacecraft Center of the National Aeronautics and Space Administration, situated southeast of Houston, neared completion in 1965. Two high-rise apartment buildings were opened in the downtown area, and several condominium apartment projects were completed in the west and southwest residential areas. Ground was broken for four new buildings at the University of Houston, which enrolled a record 19,500 students in the fall of 1965.

Finances and Economy. The city's budget for 1965 was $68,472,792, and the bonded debt stood at $290,613,000. There were indications at the end of the year that a referendum might be necessary early in 1966 for an additional $76 million bond issue. Houston's tax rate in 1965 remained at $2 per $100 of assessed valuation.

Unemployment in the Houston area in 1965 averaged 3.2% of the estimated labor force of 620,000.

JOHN T. MANNS
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University of Houston

HULL, Bobby. See biographical sketch under SPORTS.

HUMPHREY, Hubert Horatio

Vice president of the United States: b. Wallace, S.Dak., May 27, 1911.

Ability, energy, and ambition carried the son of a South Dakota pharmacist to the second-highest office in the country in 1965. On January 20, Hubert Humphrey, a Democrat and a former senator from Minnesota, was sworn in as vice president, and presented the apparent anomaly of a dynamic man entering upon an office notorious for its lack of responsibilities and power. But Humphrey, like several recent vice presidents, found ways to serve his president, and he worked vigorously for President Johnson's domestic and foreign policies.

Possible Transfer of Authority. In late January, Humphrey prepared to shoulder presidential responsibilities while President Johnson was hospitalized with a cold and sore throat, but the president recovered quickly. On October 8, while the president was under anesthesia for about four hours during a gall bladder operation, Humphrey again stood by. Johnson and Humphrey drew up a written agreement in 1965 authorizing the latter to exercise presidential powers if the president should become disabled.

"Official" Activities. By presidential assignment or by statute, Humphrey attends cabinet meetings, is a member of the National Security Council, and serves as chairman of the Peace Corps National Advisory Council, the National Aeronautics and Space Council, the President's Council on Youth Fitness, and the Special Cabinet Task Force on Travel U.S.A. Late in 1965, Johnson ended Humphrey's role as overseer of the government's civil rights activities.

The vice president presides over the Senate. On September 13 his tie-breaking affirmative vote on an amendment to the farm bill permitted the secretary of labor to continue restrictions on the importation of foreign farm workers.

Spokesman for the President. Humphrey's most significant activities in 1965 derived from his close relationship with the president, and the knowledge by others that when Humphrey spoke, he spoke for the president. "I'm in the executive branch now," he said. "My job is to promote the policies of this administration." Humphrey exerted his influence on Capitol Hill in behalf of Johnson's "Great Society" legislative program. He worked particularly hard for the farm, poverty, and foreign aid bills. Once a week he reported to the president on the status of every administration bill.

In conferences with delegations of mayors, Humphrey emphasized the president's concern about urban problems. He told businessmen that the administration had faith in business, that it could not achieve its goals without the help of business, that the country's future depended on the economy, and that profits are necessary in our society.

Daily briefings kept Humphrey informed of world events. He supported U.S. interventions in Vietnam and the Dominican Republic, to the dismay of some liberal friends. In June, during a trip to Paris with two U.S. astronauts, Humphrey explained U.S. policies to French President Charles de Gaulle.

From Dec. 27, 1965, to Jan. 2, 1966, Humphrey visited Japan, South Korea, Nationalist China, and the Philippines, where he attended the inauguration of President Ferdinand E. Marcos. He sought support for U.S. policies in Vietnam.

Politics. The vice president spoke frequently at Democratic party fund-raising dinners, and he counseled the large crop of Democratic freshmen congressmen. Some liberals frowned on his support of run-of-the-mill (and unsuccessful) Democratic machine candidates in New York City and Philadelphia.

Humphrey's support of the administration permitted his rivals for future leadership in the party, Senators Robert and Edward Kennedy, to make a bid

UPI

HUBERT HUMPHREY (l.) is sworn in as vice president by John McCormack, speaker of the House, on Jan. 20, 1965. Fred Gates, a friend of Humphrey, holds Bible used for oath.

for liberal support. When Edward Kennedy (D, Mass.) sought to abolish poll taxes in state and local elections, Johnson and Humphrey, doubting the constitutionality of such a step, successfully opposed it, but some liberals admired Kennedy's efforts. Robert Kennedy (D, N.Y.) occasionally voiced misgivings about administration foreign policies that Humphrey supported. The tacit challenge to Humphrey's liberalism underscored a hazard that one faces in serving as vice president of the United States.

Donald Young
Assistant Editor, Encyclopedia Americana;
Author of "American Roulette: The History and Dilemma of the Vice Presidency"

HUNGARY

Hungary remained one of Moscow's most trusted and faithful allies in 1965. The government followed the Soviet lead in relaxing some of its more stringent political and economic controls. Like other Soviet-bloc countries, Hungary responded to President Charles de Gaulle's gradual disassociation from U.S. policy by seeking closer ties with France. Hungary also echoed Soviet criticism of U.S. involvement in Vietnam.

Internal Affairs. In regard to the so-called liberalization of Communist rule in Hungary, the Communist party adopted a resolution in July calling for open, sincere, and full reporting on domestic and foreign affairs. Yet there was no liberalization of policy toward the Roman Catholic Church, and in the same month two groups of priests were jailed for alleged "antistate crimes." The Vatican warned that this action might endanger its improved relations with Hungary and adversely affect the negotiations over the fate of József Cardinal Mindszenty, who has lived at the U.S. legation in Budapest since the 1956 revolution.

In July, several changes in the party and government structure were made public. János Kádár resigned as premier but retained his position as the first secretary of the Communist party. The official explanation given for the change was that Kádár needed to be relieved of the excessively heavy burden of dual leadership. Deputy Premier Gyula Kállai was promoted to the post of premier. He is an intellectual and party ideologue, who during World War II had been one of the leaders of the Communist underground. After the war he held high government and party positions until his purge by the party chief, Mátyás Rákosi, in 1951. Rehabilitated in 1955, Kállai is known to be a close friend of Kádár.

Foreign Relations. Maintaining close friendships with the Soviet Union and the other members of the Soviet-bloc countries remained the cornerstone of Hungary's foreign policy. In late January, Leonid I. Brezhnev, first secretary of the Soviet Communist party's Central Committee, and Nikolai V. Podgorny, another powerful member of the Central Committee, held secret talks with Hungarian party and government leaders in Budapest. It is assumed that these talks centered on the need for a common strategy in face of the Chinese challenge to Soviet leadership in international Communism.

There were rumors after the visit that Soviet troops might be withdrawn from Hungary as an outcome of these talks. In a speech on February 11, Premier Kádár laid these rumors to rest when he declared that Soviet troops would remain in Hungary until the West agreed to Soviet proposals for disengagement in Europe.

In May, the Soviet foreign minister, Andrei A. Gromyko, paid a visit to Budapest. He was believed to have discussed French President Charles de Gaulle's proposals for closer East-West relations and the situations in Vietnam and the Dominican Republic. In the same month, Premier Kádár, accompanied by Deputy Premier Antal Apró and Central Committee Secretary Béla Biszku, spent a week in Moscow, where they were received by Brezhnev and Premier Kosygin. A joint communiqué expressed "full identity" of views. Subsequently a trade protocol was signed, promoting further coordination between the economic planning of the two countries.

Hungarian Foreign Minister János Péter visited Paris in January, and London in July. In Paris he expressed interest in President de Gaulle's plan for

HUNGARY · Information Highlights

EUROPE
ASIA
AFRICA

Area: 35,919 square miles.
Population: 10,146,000 (June 30, 1965 est.).
Chief Cities (1963 est.): Budapest, the capital, 1,899,746; Miskolc, 159,829; Debrecen, 139,630; Pécs, 126,965; Szeged, 107,326.
Government: *President*—István Dobi; *Communist Party First Secretary*—János Kádár; *Premier*—Gyula Kállai; *Parliament*—National Assembly (340 members).
Religious Faiths: Roman Catholics, 59% of population; Protestants, 30%; others, 11%.
Education: *Literacy rate* (1960)—97% of population aged 15 and over. *Total school enrollment* (1962)—1,873,771 (primary, 1,472,700; secondary, 179,406; technical, 154,341; higher, 67,324).
Finance (1965 est.): *Revenues,* $8,400,000,000; *expenditures,* $8,400,000,000; *monetary unit,* forint (11.74 forints equal U.S.$1).
Net Material Product (1964): $14,500,000,000.
Economic Indexes (1964): *Industrial production,* 173 (1958=100); *cost of living,* 100 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 2,364,000; cement, 2,257,000; wheat flour, 1,200,000; gasoline (1963), 332,000; meat, 252,000; cotton yarn, 66,600; aluminum, 56,874.
Crops (metric tons, 1964): Sugar beets, 3,554,000 (ranks 12th among world producers); maize, 3,175,000 (world rank, 12th); wheat, 2,059,000 (world rank, 20th); potatoes, 1,650,000; grapes, 927,000; barley, 818,000; apples, 432,000; rye, 265,000; tomatoes, 261,000; sunflowerseed, 114,000; oats (1963), 106,000; dry onions, 98,000.
Minerals (metric tons, 1964): Coal, 31,548,000 (ranks 14th among world producers); bauxite, 1,489,000 (world rank, 8th); iron ore, 775,000; lime, 732,000; manganese, 130,000 (world rank, 14th); crude petroleum, 13,742,000 barrels; natural gas, 29,250,000,000 cubic feet.
Foreign Trade (1964): *Exports,* $1,352,000,000 (chief exports, 1963: transportation vehicles, $140,000,000; metals, $113,000,000; meat and products, $76,000,000; fruit and vegetables, $71,000,000), imports, $1,461,000,000 (chief imports, 1963: metals, $110,000,000; textile raw materials, $95,000,000; solid fuels, $88,500,000). *Chief trading partners* (1963): USSR (took 35% of exports, supplied 33% of imports); Czechoslovakia (took 11% of exports, supplied 12% of imports); East Germany (took 9% of exports, supplied 10% of imports).
Transportation: *Roads* (1963), 18,165 miles (5,813 paved); *motor vehicles* (1963), 77,100 (automobiles, 32,000); *railways* (1963), 5,447 miles; *merchant vessels* (1964), 12 (14,000 gross registered tons); *state airline,* Hungarian Air Lines (Malév); *principal airport,* Budapest.
Communications: *Telephones* (1964): 505,198; *television stations* (1964), 8; *television sets* (1964), 500,000; *radios* (1963), 2,452,000; *newspapers* (1963), 23 (daily circulation, 1,689,000).

an independent Europe. He discussed the question of German reunification and the problem of world disarmament with French Foreign Minister Maurice Couve de Murville. The question of long-term Franco-Hungarian agreements on economic, technical, and cultural exchange was also explored.

Relations between the United States and Hungary again left much to be desired. Hungarian leaders have persistently attacked U.S. policy on Vietnam. On February 13 there were anti-American riots in Budapest and the U.S. legation was damaged.

Economy. In 1964, industrial production rose by 9%, while national income and agricultural production grew by 4% and 2%, respectively. These figures did not satisfy Lajos Fehér, a member of the Politburo, who in January blamed obsolete marketing methods and a lack of concern over raising productivity for the "slow progress of the economy." For this and other reasons, changes in economic planning were made. The revised plan for 1965 called for a sharp drop in the rate (4.5%) of industrial growth. The target for agricultural production was reduced to about 2%. The number of large investment projects was reduced by a third. The plan stressed qualitative rather than quantitative improvements and called for higher productivity.

In a parliamentary debate on the budget on February 11, Premier Kádár recommended that Hungary should follow the Soviet example in basing production on consumer demand. "Certain parts of the Hungarian economy," he said, "would have to be developed so that both the efficiency of central direction and the self-reliance of the factories should increase. Strongly centralized economic direction is slow and dragging."

Foreign Trade. The revised plan for 1965 called for a 10.1% increase in exports in order to improve the country's unfavorable trade balance, which was primarily the result of heavy purchases from six Western countries. There was a deficit of 1.1 billion foreign-exchange forints in 1964. Increased trade was planned both with Communist and non-Communist countries.

WAYNE S. VUCINICH
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HUNTING AND FISHING

According to figures released by the U.S. Department of the Interior in April 1965, state fish and game departments reported a new high in the sale of hunting and fishing licenses and permits during fiscal year 1964. Important advances were made in the field of wildlife conservation during 1965, especially in regard to the breeding grounds of both waterfowl and fish.

Licensing. The total number of hunting licenses issued during fiscal year 1964 was 14,122,659, valued at more than $72 million—an increase of nearly $4 million over the previous fiscal year. Pennsylvania, with 862,603 hunting-license holders, was the state leader. The number of fishing licenses, tags, permits, and stamps was 20,219,457, valued at more than $60 million—an increase of nearly $2.5 million over the previous year. California, Minnesota, and Wisconsin had the largest number of fishing-license holders, issuing over 1 million each. (The Department of the Interior pointed out that licensing figures are not an accurate measure of the total number of fishermen and hunters because many sportsmen are exempt for various reasons, such as age limitations. However, the figures are important since they serve as the basis of distributing federal aid to the states for fish and wildlife conservation.)

Conservation. Considerable progress has been made in preserving wetlands for waterfowl nesting. After World War II, there was a decrease in nesting areas because of the widespread elimination of wetlands by drainage in the northern prairie states and the filling in of coastal marshes for lagoon homesites and commercial purposes. In 1958 Congress increased the cost of Migratory Bird Hunting Stamps, the source of most federal aid in this field, from $2 to $3. At the same time it authorized establishment of Waterfowl Production Areas on small wetlands, and started a 7-year, $105 million purchase and lease-loan program against future stamp receipts. So far, a total of $32.5 million has been appropriated under this program.

Most of the money is spent in the waterfowl breeding areas of North and South Dakota and Minnesota by the purchase of permanent water areas. In addition, payments are made to private landowners in return for an agreement not to drain specific semipermanent water areas. Removal of land from local tax rolls created a problem which is being relieved by subsequent legislation, but in the interim the emphasis shifted to the private-ownership subsidy program.

Between July 1, 1964, and June 30, 1965, 200,000 acres came under government protection, as compared with a total of 155,000 acres in the four previous years.

Far-reaching benefits for sport and commercial fishing are expected from the National Anadromous Fishery Program Act, passed in 1965. The law authorizes cooperative projects between federal and state governments to improve conditions for anadromous fish—those that live in the sea or Great Lakes and migrate up streams to spawn, such as salmon, shad, and striped bass. Improved spawning areas, fish hatcheries, and free migration conditions for the fish are among the projects authorized by the new act. Work under the program will be covered by agreements between the secretary of the interior and individual states or groups of states acting jointly. Federal appropriations of up to $25 million will be made during the period ending June 30, 1970.

Sport Fishing Records. Two new additions were made in 1965 to the official list of freshwater fishing records compiled by *Field & Stream* magazine: spotted bass (7 pounds), on January 24 by Edward T. Simrell at Smith Lake, Ala.; and redear sunfish (2 pounds, 15 ounces), on March 6 by Ronald D. Gray, Jr., at Ponte Vedra Beach, Fla.

The International Game Fish Association (IGFA), which compiles official saltwater records, announced three new records in the all-tackle class: permit (50 pounds), on March 27 by Robert F. Miller at Miami, Fla.; pollack (43 pounds), on Oct. 21, 1964, by Philip Barlow at Brielle, N.J.; and porbeagle shark (400.5 pounds), on May 16 by James T. Kirkup at Fire Island, N.Y. The IGFA also reinstated as a record the 36-pound blackfin tuna caught off Bermuda in 1963 by Joseph E. Baptiste, Jr., after a larger fish was found to be the wrong species.

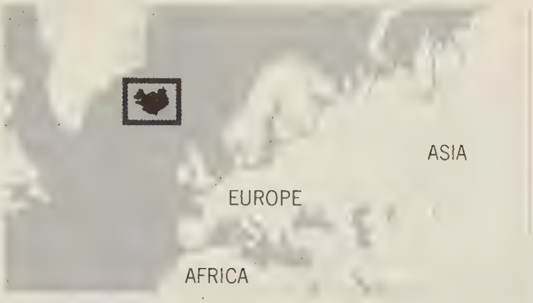
MIKE BALL
Fishing Contest Editor, "Field & Stream"

HURRICANES. See DISASTERS; WEATHER.

HYGIENE. See INDUSTRIAL HEALTH AND SAFETY; PUBLIC HEALTH.

ICE SKATING. See SPORTS.

ICELAND



The volcano-born island of Surtsey drew increasing attention from scientists in 1965. They found much to study on the Westman Islands' newest member, which erupted from the ocean 75 miles southeast of the Icelandic capital of Reykjavik on Nov. 14, 1963. Surtsey has been declared a national preserve, off limits to casual visitors.

New Island. At first, Surtsey's survival was in doubt, its ash and pumice surface at the mercy of the Atlantic's winds and waves. But a flow of lava, beginning April 4, 1964, and continuing for 13 months, spread a protective skin over half of the island. Gradually, signs of life appeared. By the middle of 1965, seeds of a few coastal plants were in evidence, and molds, bacteria, and a few sea worms had established themselves. Scientists want to know in what ways water, winds, and birds have brought life to the island.

The generation of electricity by the volcano was apparent in flashes of lightning that occurred in the absence of thunderclouds. In another phenomenon, hailstones pelted passengers on nearby ships.

ICELAND · Information Highlights

Area: 39,702 square miles.
Population: 190,230 (Dec. 1, 1964 est.).
Chief Cities (1964 est.): Reykjavik, the capital, 77,220.
Government: *President*—Asgeir Asgeirsson; *Prime Minister*—Bjarni Benediktsson. *Parliament*—Althing; Upper House, 40 members; Lower House, 20 members; party seating (1965), both houses: Independence 24; Social Democratic 8; Progressive 19; Labor Union (Communist) 9.
Religious Faiths: Evangelical Lutherans, 96% of population; Roman Catholics, 0.5%.
Education: *Literacy rate*—99% of population. *Total school enrollment* (1962–63)—39,297 (primary, 24,050; secondary, 11,084; teacher-training, 216; technical and vocational, 3,127; university, 820).
Finance (1964 est.): *Revenues,* $59,000,000; *expenditures,* $55,000,000; *monetary unit,* króna (43.06 krónur equal U.S.$1).
Gross National Product (1963): $317,000,000.
National Income (1963): $241,000,000; average annual income per person, $1,296.
Economic Indexes (1964): *Industrial (fishing) production* (1958 =100), 190; *cost of living* (1958=100), 162.
Manufacturing (metric tons, 1963): Cement (1964), 108,000; fish meal, 92,100; salted herring, 53,800; meat, 14,000; beer, 1,710.
Crops (metric tons, 1963): Hay, 354,500; potatoes, 7,600; turnips, 350.
Chief Mineral: Pumice (1964), 10,000 metric tons.
Foreign Trade (1964): *Exports,* $111,100,000 (chief exports, 1963: frozen fish, $26,600,000; salted herring, $12,800,000; herringmeal, $10,200,000; herring oil, $7,000,000); *imports,* $131,400,000 (chief imports, 1963: petroleum products, $12,000,000; nonelectrical machinery, $11,900,000; textile yarn, fabrics, $8,700,000). *Chief trading partners* (1963): Britain (took 20% of exports, supplied 13% of imports); U.S. (took 16% of exports, supplied 12% of imports); West Germany (took 11% of exports, supplied 12% of imports).
Transportation: *Roads* (1964), 6,855 miles (24 paved); *motor vehicles* (1964), 29,224 (automobiles, 22,342); *merchant vessels* (1964), 23 (60,000 gross registered tons); *civil airlines,* Icelandair, Icelandic Airlines; *principal airport,* Reykjavik.
Communications: *Telephones* (1964): 47,938; *radios* (1963), 51,000; *newspapers* (1963), 5 (daily circulation, 82,000).

"Moon" Survey. In July, 28 members of a U.S. space team surveyed a section of Iceland believed to resemble the surface of the moon. The men, including some astronauts, performed duties similar to those that they someday may execute on the moon itself. The activities were conducted in the vicinity of the Askja volcano, which erupted in 1961.

Economy. Early in 1965, the Organization for Economic Cooperation and Development (OECD) reported that Iceland's soaring inflation had been slowed. But the OECD noted that rising wages and farm subsidies and an automatic wage-price escalator link would "make it difficult to achieve reasonably stable conditions in the near future." Citing a sharp increase in government spending, the OECD called for a "considerable tightening of fiscal policy." The national budget jumped 13% in 1965. A shift of the labor force from fishing and agriculture to construction and manufacturing continued in 1965. Industry is concentrated in Reykjavik, which has grown 25% in 10 years.

U.N. Support. In June, after some countries refused to pay peace-keeping assessments, Iceland and other nations made voluntary contributions to the United Nations. Iceland pledged $80,000.

IDAHO

The Idaho Legislature met for 74 days in 1965—the longest session since the 1860's. It passed a 3% sales tax and increased the general budget to $135 million—one third over the previous budget of $101 million.

Finance. The 3% sales tax, which took effect in 1965, but will go before the voters for final ratification in a referendum in the 1966 general election, is expected to raise $56 million in the 1965–66 biennium. (The proposal received double the number of signatures necessary to place it on the 1966 ballot.) Of the $56 million anticipated from the tax, $23 million will be used as a means of lowering income and general property taxes, and $33 million will finance the budget increase.

The Legislature attempted to make assessment values for tax purposes more nearly uniform, but it set a higher rate for public utility property than for other types of property. As a result, the constitutionality of the act was placed before the courts.

Education. Education gained most in the increased budget. Public schools received $57 million for 1965–66, as compared with $40 million in 1963. The budgets of the two state universities increased from $26 million in 1964 to $33 million in 1965.

Both universities inaugurated new presidents during the year. Ernest W. Hartung became president of the University of Idaho, at Moscow, succeeding Donald R. Theophilus, who had been associated with the university for 37 years. William E. Davis replaced Donald E. Walker as president of the Idaho University at Pocatello.

Among other education news, Boise Junior College became a four-year, degree-granting institution, and six junior college districts were established in the state.

Reapportionment. The Legislature reapportioned itself in a seven-day special session immediately following the regular one. The state was divided into multicounty districts so that House members would represent nearly equal numbers of voters. The Senate plan calls for one senator from each county in

IDAHO · Information Highlights

Area: 83,557 square miles.
Population: 702,000 (1965 est.).
Chief Cities (1965 est.): Boise, the capital (54,000); Pocatello (42,500); Idaho Falls (38,000); Twin Falls (21,000); Nampa (19,600); Coeur d'Alene (14,800); Caldwell (13,500); Moscow (12,700).
Government: *Chief Officers*—governor, Robert E. Smylie (Republican); lt. gov., William E. Drevlow (Democrat); secy. of state, Arnold Williams (D); atty. gen., Allan G. Shepard (R); treas., Marjorie R. Moon (D); supt. of pub. instr., D.F. Engleking (D); chief justice, Henry F. McQuade. *Legislature* (convened Jan. 4, 1965); Senate, 44 members (19 Democrats, 25 Republicans); House of Representatives, 69 members (37 D, 42 R).
Education: *School enrollment* (1964–65)—public elementary, 99,866 pupils (3,650 teachers); public secondary, 82,912 pupils (3,400 teachers); nonpublic schools, 10,200 pupils (350 teachers); college and university (fall 1964), 18,129 students. *Public school expenditures* (1964–65)—$56,450,000 ($332 per pupil); average teacher's salary, $5,150.
Public Finance (fiscal year 1965): *Revenues,* $226,223,674 (motor fuel tax, $19,935,037; federal funds, $53,129,562). *Expenditures,* $219,443,005 (education, $13,988,078; health, welfare, and safety, $26,578,641; highways, $49,764,032). *State debt,* $1,111,000 (June 30, 1965).
Personal Income (1964): $1,398,000,000; average annual income per person, $2,020.
Public Assistance (fiscal year 1965): $10,573,764 to 17,895 recipients (aged, $3,901,031; dependent children, $4,512,289).
Labor Force (employed persons, July 1965): *Agricultural,* 58,400; *nonagricultural* (wage and salary earners), 211,300 (15.1% manufacturing, 20.3% trade, 19.1% government). *Unemployed persons* (July 1965)—10,800.
Manufacturing (1963): Value added by manufacture, $365,695,000 (transportation equipment, $5,032,000; nonelectrical machinery, $5,048,000; fabricated metals, $6,218,000; food and products, $109,906,000).
Agriculture (1964): *Cash farm income,* $489,758,000 (livestock, $196,899,000; crops, $265,108,000; govt. payments, $27,751,000). *Chief crops* (tons)—hay, 3,302,000 (ranks 15th among the states); alfalfa, 2,894,000 (rank, 8th); sugar beets, 2,881,000 (rank, 2nd); potatoes, 2,082,000 (rank, 1st); wheat, 1,386,000 (rank, 11th); barley, 652,464 (rank, 4th); oats, 120,640 (rank, 19th).
Mining (1964): *Production value,* $86,262,000 (ranks 32nd among the states). *Chief minerals* (tons)—silver, 16,483,000 troy ounces (rank, 1st); lead, 71,312 (rank, 2nd); zinc, 59,298 (rank, 3rd); copper, 4,666 (rank, 8th); iron ore, 4,500 (rank, 14th); gold, 5,677 troy ounces (rank, 11th).
Transportation: *Roads* (1965), 39,520 miles (10,555 paved); *motor vehicles* (1965), 445,058; *railroads* (1964), 2,666 miles; *aircraft* (1964), 1,290 (178 airports).
Communications (1965): *Telephones,* 260,000; *television stations* (1965), 9; *radio stations* (1965), 40; *newspapers,* 13 (daily circulation, 147,548).

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the district. It was declared unconstitutional in December, and a special legislative session to reapportion was called for February 1966.

National Politics. Gov. Robert E. Smylie, chairman of the 1964 Republican Governors Conference, continued to lead liberals in this party who wished to wrest control from the party's more conservative element.

Congressional Grants. Congress established Nez Perce National Park, which includes important historical points situated on 22 separate parcels of land within a 6,600-square-mile area. It also appropriated money to start building Lower Granite Dam on the Snake River. Work on Dworshak Dam on the Clearwater River continued.

Weather. Destructive floods that struck the Pacific Northwest in January caused extensive damage to small towns, agricultural land, and roads in Idaho. One section of the state's main north-south highway was put out of service until September.

Heavy frosts destroyed much of the state's soft fruit. August rains decreased the value of cereal crops in the north, and September frosts and snows damaged potato, corn, and beet crops in the south.

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ILLIA, Arturo U. See biographical sketch under Argentina.

ILLINOIS

Illinois was one of the many states concerned with the problem of legislative reapportionment in 1965. The General Assembly was unable to achieve the reapportionment of either the House of Representatives, the state Senate, or Illinois' U.S. congressional districts. The Senate and the congressional districts were finally reapportioned by the courts, and the House by a bipartisan commission appointed by the governor.

Reapportionment. In September, after jurisdictional squabbling between the Illinois Supreme Court and a federal district court, the two courts entered the political thicket together and drew district lines for both the state Senate and the congressional districts.

After the General Assembly failed to reach agreement on reapportionment of the House, the governor appointed a 10-member bipartisan commission to do the job. The commission reached an agreement on December 4, but the new reapportionment map drew some complaints from southern Illinois Democrats.

Legislative Action. The reapportionment struggle was not the only excitement during the legislative session. (The lively session was due in part to the large number of new members elected in the special at-large election in 1964.) The legislature was rocked late in the session by a newspaper report of recorded conversations that suggested bribery among lobbyists for the state's currency exchanges. The legislature reacted to the disclosure by creating interim commissions to investigate the report and to consider conflict-of-interest legislation.

The legislature passed several significant measures. It approved a constitutional revenue amendment, to be submitted to Illinois voters in 1966, which would provide for a nongraduated state income tax. (Illinois does not have a state income tax.) Legislation implementing the state master plan for higher education provided in part for a junior college board to help establish a statewide system of junior colleges. The state primary election date was moved from April to June, making Illinois' primary elections the last to be held before the national political conventions. A new state Department of Business and Economic Development was created. The legislators also passed a series of crime-prevention bills and a number of measures to strengthen the state's food-inspection laws.

Floods and Tornadoes. Floods and tornadoes devastated parts of Illinois in the spring. The Quad-Cities area of Moline, East Moline, Rock Island, and Davenport (Iowa) was particularly hard hit when the Mississippi River crested there at seven feet above flood level on April 28. Seven persons were killed by tornadoes in the northeastern part of the state on April 11. President Johnson declared Illinois a major disaster area on April 28.

Stratton Acquitted. Former Governor William G. Stratton was acquitted of income tax evasion charges by a federal jury in Chicago in March. The decision had far-reaching implications. The prosecution asserted that Stratton had failed to report taxable income of over $80,000 in his second term as governor (1957–60). The defense claimed that income from political contributions is untaxable.

Adlai E. Stevenson Rites. Adlai E. Stevenson, another former governor, who died in London on July 14, 1965, while serving as U.S. ambassador to the United Nations, was brought home to Illinois for burial. On July 17, thousands filed past the bier

ILLINOIS · Information Highlights

Area: 56,400 square miles.

Population: 10,584,000 (1965 est.).

Chief Cities (1965 est.): Springfield, the capital (87,000); Chicago (3,520,000); Rockford (136,000); Peoria (100,000); Decatur (85,000); East St. Louis (82,000); Evanston (81,000); Cicero (70,000).

Government: *Chief Officers*—governor, Otto Kerner (Democrat); lt. gov., Samuel H. Shapiro (D); secy. of state, Paul Powell (D); atty. gen., William G. Clark (D); treas., William J. Scott; supt. of public instr., Ray Page; chief justice, Ray I. Klingbiel. *Legislature*—General Assembly (convened Jan. 6, 1965); Senate, 58 members (33 Republicans, 25 Democrats); House of Representatives, 177 members (59 R, 117 D, 1 vacancy).

Education: *School enrollment* (1964–65)—public elementary, 1,539,923 pupils (50,654 teachers); public secondary, 558,274 pupils (85,299 teachers); nonpublic schools, 600,100 pupils (15,570 teachers); college and university (fall 1964), 279,822 students. *Public school expenditures* (1964–65)—$1,032,488,000 ($551 per pupil); average teacher's salary, $6,809.

Public Finance (fiscal year 1964): *Revenues,* $1,938,034,000 (sales tax, $558,584,000; motor fuel tax, $161,087,000; federal funds, $406,244,000). *Expenditures,* $1,798,039,000 (education, $509,327,000; health, welfare, and safety, $423,596,000; highways, $462,868,000). *State debt,* $423,685,000 (1964).

Personal Income (1964): $31,895,000,000; average annual income per person, $3,041.

Public Assistance (fiscal year 1965): $289,616,794 to 420,612 recipients (aged, $63,975,768; dependent children, $140,649,649).

Labor Force (employed persons, June 15, 1965): *Agricultural,* 204,000; *nonagricultural* (wage and salary earners), 3,829,000 (33.7% manufacturing, 21.1% trade, 13.0% government). *Unemployed persons* (June 15, 1965)—141,000.

Manufacturing (1963): Value added by manufacture, $14,557,060,000 (transportation equipment, $595,239,000; primary metals, $1,158,132,000; nonelectrical machinery, $2,181,630,000; electrical machinery, $1,781,288,000; fabricated metals, $1,369,080,000; food and products, $2,043,377,000).

Agriculture (1964): *Cash farm income,* $2,345,137,000 (livestock, $1,116,913,000; crops, $1,097,245,000; govt. payments, $130,979,000). *Chief crops* (tons)—corn for grain, 19,905,000 (ranks 2nd among the states); hay, 4,081,000 (rank, 11th); alfalfa, 2,904,000 (rank, 6th); wheat, 2,005,000 (rank, 7th); oats, 898,000 (rank, 6th); apples, 120,000 (rank, 12th); popcorn, 26,000 (rank, 3rd).

Mining (1964): *Production value,* $591,136,000 (ranks 8th among the states). *Chief minerals* (tons)—coal, 55,023,000 (rank, 4th); fluorspar, 127,454 (rank, 1st); zinc, 13,800 (rank, 14th); lead, 2,180 (rank, 10th); petroleum, 70,168,000 barrels (rank, 8th); stone, 42.987.000.

Transportation: *Roads* (1965), 126.936 miles (117,016 paved); *motor vehicles* (1965), 4.486,212; *railroads* (1963), 11,005 miles; *aircraft* (1964), 6,195 (609 airports).

Communications: *Telephones* (1965), 5,533,600; *television stations* (1964), 20; *radio stations* (1964), 170; *newspapers* (1964), 83 (daily circulation, 3,880,446).

where his body lay in state in the rotunda of the Capitol. After a state funeral in the Capitol, the body was taken to Bloomington for burial. Mourners at the services in Bloomington on July 19 included President and Mrs. Lyndon Johnson, Vice President and Mrs. Hubert Humphrey, Chief Justice Earl Warren, and Justice Arthur Goldberg, who succeeded Stevenson at the United Nations. (See STEVENSON, ADLAI EWING.)

Trade Delegation to the Far East. In November, Governor Otto Kerner led a group of Illinois businessmen to the Far East to stimulate trade with state firms. The governor had led a similar trade delegation to Europe in 1963.

Krebiozen. The drug Krebiozen, an alleged cure for cancer introduced in 1951, continued to be in the news. In a trial that lasted over 10 months the government charged Dr. Andrew C. Ivy and Stevan and Marko Durovic, promoters of the drug, with conspiracy, mail fraud, misleading advertising, and false statements to the government. Early in February 1966, the trial ended with the jury returning a verdict of acquittal on all counts for each of the defendants involved in the case. (See also CHICAGO.)

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IMMIGRATION

President Johnson signed into law a new bill on Oct. 3, 1965, to amend the Immigration and Nationality Act. The new law gradually abolishes the national-origins quota system, eliminating it completely by July 1, 1968. The official title of the new bill is "An Act to amend the Immigration and Nationality Act, and for other purposes."

The new act provides a ceiling of 170,000 for immigrants from countries outside the Western Hemisphere, with a limit of 20,000 from any single country. Effective July 1, 1968, the bill places a ceiling of 120,000 immigrants annually from countries in the Western Hemisphere. The act exempts "immediate relatives" (children, spouses, and parents) from all numerical limitation. Also exempt are "special immigrants," who include Western Hemisphere natives, returning resident aliens, ministers of religion, and others. Within numerical limitations, selection of immigrants is made on the basis of preferences favoring family reunification and persons with talents and skills needed in the United States.

A record number of 186 million persons were inspected and admitted into the United States by immigration officials in the fiscal year ending June 30, 1965. This figure included multiple entries across the Canadian and Mexican borders. Of the total, 102 million were aliens and 74 million were U.S. citizens. Almost 3 million persons were members of ship or airplane crews, about 8 million were mainly passengers arriving aboard 83,816 vessels and 239,816 airplanes.

Immigrants. The total of 296,697 persons admitted for permanent residence in the United States in fiscal year 1965 was 1.5% higher than that in fiscal year 1964. While the number of immigrants born in Europe decreased by some 9,000, the number of natives of North American countries rose by approximately 14,000.

Table 1—IMMIGRANT ALIENS ADMITTED TO THE UNITED STATES
(Year ended June 30, 1965)

Country or region of birth	Total admitted	Quota immigrants	Nonquota immigrants
All countries	296,697	99,381	197,316
Europe	114,329	89,997	24,332
Austria	1,680	1,388	292
Czechoslovakia	1,894	1,668	226
Denmark	1,384	1,150	234
France	4,039	2,755	1,284
Germany	24,045	20,327	3,718
Greece	3,002	700	2,302
Hungary	1,574	909	665
Ireland	5,463	5,400	63
Italy	10,821	5,573	5,248
Netherlands	3,085	2,792	293
Norway	2,256	2,212	44
Poland	8,465	7,015	1,450
Portugal	2,005	438	1,567
Sweden	2,411	2,363	48
United Kingdom	27,358	26,954	404
USSR (Europe and Asia)	1,853	1,594	259
Yugoslavia	2,818	1,008	1,810
Other Europe (includes Turkey in Asia)	10,176	5,751	4,425
North America	126,729	1,985	124,744
Canada	38,327	29	38,298
Mexico	37,969	1	37,968
Cuba	19,760	...	19,760
Other West Indies	17,823	1,719	16,104
Central America	12,423	106	12,317
Other North America	427	130	297
South America	30,962	214	30,748
Asia	19,778	4,572	15,206
Africa	3,383	1,723	1,660
Oceania	1,512	890	622
Australia	757	414	343
New Zealand	309	169	140
Other Oceania	446	307	139
Other countries	4	...	4

Source: U.S. Department of Justice, Immigration and Naturalization Service.

UPI

PRESIDENT JOHNSON speaks to audience on Liberty Island, New York Harbor, after signing immigration act, Oct. 3.

The number of quota immigrants admitted in fiscal year 1965 declined to 99,381—a 3.4% drop from 1964. Most of the decrease was among persons born in Germany and Britain.

Prior to the recent amendment of the Immigration and Nationality Act, preference classification was granted to highly skilled aliens whose services were urgently needed in the United States, and to specified relatives of U.S. citizens and permanent resident aliens. In the first-preference classification, highly skilled aliens admitted in fiscal year 1965 totaled 2,376, accompanied by 2,610 spouses and children. In the second-, third,- and fourth-preference classifications, 13,082 close relatives of citizens and resident aliens were admitted.

The number of nonquota immigrants increased 4.2%, to a total of 197,316. These included 153,199 natives of Western Hemisphere countries, chiefly Canada, Mexico, and Cuba, with spouses and children; 32,714 spouses and children of U.S. citizens; 6,315 admitted under special legislation; and 5,088 others.

An additional 3,184 refugee-escapees from Communist countries were paroled into the United States in fiscal year 1965. Under the Hong Kong parolee program, instituted by presidential directive in 1962, a total of 13,655 Chinese refugees had entered the United States by the end of fiscal year 1965.

Only 1,142 Cubans managed to escape from Cuba during 1965. Most of them had made the trip by boat and were picked up at sea by the U.S. Coast Guard in the Florida area. Since Jan. 1, 1959, when the Castro regime seized power, a total of 227,523 Cubans have entered the United States as refugees in temporary status, and 55,643 have been admitted as immigrants. (Some of these immigrants had entered as refugees in temporary status and are included in the 227,523 total of temporary entries.)

Nonimmigrants. Nonimmigrant aliens admitted in fiscal year 1965 increased 19% over 1964, to a total of 2,075,967. (The total excludes border crossers, crewmen, and Mexican agricultural laborers.) Tourists, mostly from Mexico, Canada, and Britain, numbered 1,323,479, an increase of 218,211 over 1964. Visitors for business reasons totaled 175,500, and aliens in transit totaled 142,686. Students admitted numbered 50,435; exchange visitors, 33,768; foreign officials, 57,333; and temporary workers and trainees, 67,869. In addition, 1,872,673 alien crewmen were granted shore leave, and 100,876 Mexican agricultural workers entered prior to the expiration of the Agricultural Act of 1949 on Dec. 31, 1964.

Deportable Aliens. The number of deportable aliens located during the 1965 fiscal year was 110,371—an increase of 27% over the 1964 figure. Among the violators were 39,213 visitors whose

Table 2—PRINCIPAL COUNTRIES OF FORMER ALLEGIANCE OF PERSONS NATURALIZED IN THE UNITED STATES
(Years ended June 30, 1962–65)

Country or region of former allegiance	1962	1963	1964	1965
All countries	127,307	124,178	112,234	104,299
Europe	88,302	84,940	71,636	66,020
Austria	1,474	1,352	1,196	1,063
Czechoslovakia	1,127	961	681	658
France	1,737	1,889	1,697	1,521
Germany	18,568	19,165	16,646	14,929
Greece	6,092	3,874	3,366	3,256
Hungary	5,682	9,601	4,723	4,054
Ireland	3,507	4,303	3,697	3,322
Italy	17,449	12,171	12,323	10,742
Latvia	1,055	856	624	545
Netherlands	3,260	3,556	2,748	2,503
Poland	5,362	4,426	3,969	4,017
United Kingdom	9,696	10,989	9,826	9,370
USSR	2,306	1,877	1,329	1,071
Yugoslavia	2,628	2,284	1,965	2,013
Other Europe	8,359	7,636	6,846	6,956
Asia	14,573	15,253	15,724	14,680
China (including Taiwan)	4,109	4,268	4,045	3,692
Israel	1,545	2,274	3,029	2,883
Japan	3,563	3,459	3,061	2,660
Philippines	2,438	2,132	2,274	2,499
Other Asia	2,918	3,120	3,315	2,946
North America	20,378	19,560	19,782	18,626
Canada	9,272	9,944	9,479	8,489
Mexico	7,205	5,285	5,213	5,080
Cuba	2,211	2,101	2,683	2,522
Other North America	1,690	2,230	2,407	2,535
South America	1,427	1,986	2,139	2,136
Other countries	2,627	2,439	2,953	2,837

Source: U.S. Department of Justice, Immigration and Naturalization Service.

status had expired, 32,938 illegal entrants, and 2,389 deserting crewmen. Aliens deported numbered 10,143, and those required to depart without formal deportation proceedings, 95,263.

Naturalizations. In the 1965 fiscal year, the number of persons naturalized totaled 104,299—a 7% drop from the previous year. Under general legal provisions, 76,630 petitions for naturalization were granted. Under special provisions, 24,516 persons were naturalized as the spouses or children of U.S. citizens, and 3,153 were found eligible for other reasons. A substantial group of those naturalized was the 7,914 natural or adopted children of U.S. citizens.

A total of 35,007 certificates of citizenship was awarded in the 1965 fiscal year. Among the recipients, 17,617 were children born abroad to U.S. parents, and 17,390 were persons who had married U.S. citizens or whose parents had been naturalized.

RAYMOND F. FARRELL
Commissioner of Immigration and Naturalization
U.S. Department of Justice

INCOME

The U.S. economy performed strongly in 1965. Production, income, and profits recorded marked advances; unemployment declined further; and the rise in prices, although somewhat larger than in recent years, was moderate. December 1965 marked the 58th consecutive month of the economy's expansion since the recession trough of February 1961—an advance of unprecedented length in the United States during peacetime. Public fears of another recession evaporated as business, consumer, and government demands continued to expand.

Expansion of National Output. The gross national product (the market value of total output) rose from $629 billion in 1964 to a seasonally adjusted annual rate of $667 billion in the first three quarters of 1965. (See Table 1.) By the third quarter of 1965, the GNP had reached an annual rate of $677.5 billion, and for 1965 as a whole it was a little over $675 billion—topping 1964 by 7.5% in current prices and 5.5% in real national output.

Table 1—GROSS NATIONAL PRODUCT OR EXPENDITURE, 1962–65
(Billions of dollars)[1]

Item	1962	1963	1964	1965
Gross national product	560.3	589.2	628.7	666.6
Personal consumption expenditures	355.1	373.8	398.9	424.5
Durable goods	49.5	53.4	58.7	64.2
Nondurable goods	162.6	168.0	177.5	187.2
Services	143.0	152.3	162.6	173.1
Gross private domestic investment	83.0	86.9	92.9	101.8
New construction	44.5	46.6	48.6	50.3
Residential nonfarm	24.8	26.3	27.0	27.2
Other	19.7	20.3	21.6	23.1
Producers' durable equipment	32.5	34.6	39.4	44.3
Change in business inventories	6.0	5.7	4.8	7.2
Net exports of goods and services	5.1	5.9	8.6	7.3
Government purchases of goods and services	117.1	122.6	128.4	133.0
Federal	63.4	64.4	65.3	66.0
State and local	53.7	58.3	63.1	67.0

[1] Detail will not necessarily add to totals because of rounding. [2] Data cover first three quarters and represent averages of seasonally adjusted quarterly totals expressed at annual rates. (Source: U.S. Department of Commerce.)

The remarkable 5.5% rise in real national output in 1965 followed on the heels of the substantial expansion (5%) in 1964. It seemed evident that the brisk pace of economic activity during these two years was due primarily to the impact of the Revenue Act of 1964, which provided for sizable reductions in personal and corporation income taxes. The 1964 tax cuts gave a powerful stimulus to total demand and production, and probably made the difference between a sluggish economy and the brisk economy of the 1964–65 period.

The performance of the economy in 1965 was somewhat stronger than that projected by the Council of Economic Advisers in its *Annual Report* of January 1965. A GNP of $675 billion for the year would be near the upper end of the range in the council's January forecast, which at the time was more optimistic than most private projections. As the council predicted, the extra gains came from the great strength shown by two sectors of the economy: personal consumption and fixed business investment.

Consumer spending advanced very strongly in the first three quarters of 1965, and probably would account for as much as 70% of the GNP increase for the year as a whole. Although the surge in consumption was most notable in durable goods (especially automobiles), it extended across the board to nondurable goods and services. Fixed business investment in 1965 was expected to rise 13.5 over 1964, according to a U.S. government survey of investments anticipated by businessmen.

Residential construction did not expand greatly in 1965, but neither did it continue to decline as in 1964. The full-year result would probably show little change from 1964 in current-dollar terms, although it might be some 3% lower in real terms.

On the whole, the aggregate demand in 1965 continued to advance at a pace somewhat greater than the growth of the economy's capacity. The utilization of manufacturing capacity had risen by the summer of 1965 to a level slightly above 90%. Manufacturers prefer a 92% rate. The percentage of unemployment among the labor force had declined to 4.2% by November 1965. (Early in 1961, when the unemployment rate was about 7%, the U.S. government established an interim target of 4% unemployment as tantamount to full employment.)

The index of industrial production (covering manufacturing, mining, and utilities) was 8% higher in the first ten months of 1965 than in the corresponding period of 1964. The index in 1965 rose steadily through August, but then leveled out as the production of steel fell sharply. Following the negotiation of a new steel labor contract in late August, steel users found it necessary to liquidate the excessive inventories they had built up as a hedge against a possible prolonged work stoppage. As a result of this liquidation, the volume of iron and steel production declined by one fourth between July and October. (See ECONOMIC REVIEW; HOUSING; INDUSTRIAL PRODUCTION.)

National Income. The net current-production earnings of labor and property, as measured in the national income, expanded substantially between 1964 and 1965, in line with the growth of aggregate demand. As shown in Table 2, this rise of national income centered mainly on employee earnings (which accounts for more than two thirds of the total), corporation profits, net interest, and farm income. Business, professional, and personal rental income increased only moderately.

Particularly noteworthy was the further substantial advance in corporate profits. A strongly rising sales volume, stable labor costs per unit of output, and reduced overhead costs per unit raised corporate profits before taxes by about 60% between the first quarter of 1961 and the third quarter of 1965.

Because of reductions in federal tax rates, the relative increase in corporate profits after taxes was even larger than that of profits on a before-tax basis. There was no deceleration of the profit rise in 1965; nor was there evidence of a profit squeeze. Increases in profit margins had developed, restoring the favorable position of the early 1950's.

Corporate profits in 1965 rose to a record total of about $45 billion after taxes, as compared with $37.2 billion in 1964. The 20 million stockholders in the United States shared in this bonanza, by receiving dividends that were expected to exceed the record $17.2 billion paid in 1964 by 8 to 10%.

One of the factors contributing to rising incomes is the increased efficiency gained by capital expenditures for more productive equipment. These expenditures totaled about $51.5 billion in 1965, and were expected to exceed $58 billion in 1966.

Table 2—NATIONAL INCOME BY DISTRIBUTIVE SHARES, 1962–65
(Billions of dollars)[1]

Item	1962	1963	1964	1965[2]
National income	457.7	481.1	514.4	550.0
Compensation of employees	323.6	341.0	365.3	389.0
Wages and salaries	296.1	311.2	333.5	355.2
Private	240.1	251.6	269.2	287.4
Government	56.0	59.6	64.3	67.8
Supplements to wages and salaries	27.5	29.8	31.8	33.8
Income of unincorporated enterprises and inventory valuation adjustment	50.1	50.8	51.1	53.7
Business and professional	37.1	37.8	39.1	40.1
Farm	13.0	13.0	12.0	13.6
Rental income of persons	16.7	17.6	18.2	18.6
Corporate profits and inventory valuation adjustment	55.7	58.1	64.5	72.3
Corporate profits before tax	55.4	58.6	64.8	73.7
Corporate profits tax liability	24.2	26.0	27.6	29.4
Corporate profits after tax	31.2	32.6	37.2	44.4
Inventory valuation adjustment	0.3	−0.4	−0.3	−1.4
Net interest	11.6	13.6	15.2	16.4

[1] Detail will not necessarily add to totals because of rounding. [2] Data cover first three quarters and represent averages of seasonally adjusted quarterly totals expressed at annual rates. (Source: U.S. Department of Commerce.)

Flow of Personal Income. The current income received by individuals from all sources (as shown in Table 3) was at a seasonally adjusted annual rate of $526 billion in the first three quarters of 1965. This was 7% above the rate for the corresponding period of 1964. By October of 1965, personal income had reached an annual rate of $540 billion; this was $5.5 billion below the September rate, which had included large retroactive payments of Social Security benefits. Exclusive of these, personal income expanded by substantial rates of $3 billion in September and $5 billion in October.

Table 3—PERSONAL INCOME AND DISPOSITION OF INCOME, 1962–65
(Billions of dollars)[1]

Item	1962	1963	1964	1965[2]
Personal income	442.6	464.8	495.0	525.8
Wage and salary disbursements	296.1	311.2	333.5	355.2
Other labor income	13.9	14.8	16.5	17.5
Proprietors' and rental income	66.8	68.4	69.3	72.3
Dividends	15.2	15.8	17.2	18.2
Personal interest income	27.7	31.1	34.3	36.7
Transfer payments	33.3	35.2	36.6	39.0
Less: Personal contributions for social insurance	10.3	11.8	12.4	13.2
Less: Personal tax and nontax payments	57.4	60.9	59.2	65.1
Federal	48.6	51.5	48.6	53.7
State and local	8.7	9.5	10.6	11.4
Equals: Disposable personal income	385.3	403.8	435.8	460.7
Less: Total personal outlays[3]	355.1	373.8	398.3	424.5
Equals: Personal saving	30.2	30.0	36.9	36.2

[1] Detail will not necessarily add to totals because of rounding. [2] Data cover first three quarters and represent averages of seasonally adjusted quarterly totals expressed at annual rates. [3] Includes personal consumption expenditures, interest paid by consumers, and personal transfer payments to foreigners. (Source: U.S. Department of Commerce.)

Personal Income by States. The dollar flow of income to individuals was at a record high in nearly all states in 1964, the latest year for which official estimates were available. Relative increases in total personal income from 1963 to 1964 were fairly uniform among the regions; only in the Rocky Mountain and Plains regions did the rate of income growth (3%) differ by more than one percentage point from the national average of 6.5% (see Table 4). By states, however, percentage changes in personal income from 1963 to 1964 showed substantial differences, attributable in large part to wide variations in the rate of change in farm income.

Table 4—PERSONAL INCOME BY STATES AND REGIONS, 1963 AND 1964*

State and region	Total personal income (in millions of dollars) 1963	1964	Per capita amount 1964	Percent of national per capita income 1964
United States	461,670	491,004	2,566	100
New England	29,780	31,731	2,866	112
Maine	1,971	2,108	2,132	83
New Hampshire	1,450	1,555	2,377	93
Vermont	827	867	2,119	83
Massachusetts	14,889	15,828	2,965	116
Rhode Island	2,153	2,298	2,514	98
Connecticut	8,490	9,075	3,281	128
Mideast	113,617	120,932	2,965	116
New York	53,361	56,649	3,162	123
New Jersey	18,861	20,078	3,005	117
Pennsylvania	28,017	29,805	2,601	101
Delaware	1,570	1,699	3,460	135
Maryland	9,163	9,838	2,867	112
District of Columbia	2,645	2,862	3,544	138
Great Lakes	97,073	103,434	2,750	107
Michigan	20,624	22,311	2,755	107
Ohio	25,164	26,728	2,646	103
Indiana	11,648	12,273	2,544	99
Illinois	30,020	31,895	3,041	119
Wisconsin	9,617	10,227	2,490	97
Plains	36,594	37,790	2,399	93
Minnesota	8,152	8,364	2,375	93
Iowa	6,459	6,548	2,376	93
Missouri	10,900	11,463	2,600	101
North Dakota	1,300	1,376	2,133	83
South Dakota	1,390	1,343	1,879	73
Nebraska	3,376	3,477	2,349	92
Kansas	5,017	5,219	2,346	91
Southeast	74,360	79,871	1,917	75
Virginia	8,907	9,804	2,239	87
West Virginia	3,348	3,531	1,965	77
Kentucky	5,545	5,781	1,830	71
Tennessee	6,588	7,061	1,859	72
North Carolina	8,601	9,282	1,913	75
South Carolina	3,944	4,229	1,655	64
Georgia	7,715	8,345	1,943	76
Florida	11,933	12,841	2,251	88
Alabama	5,538	5,959	1,749	68
Mississippi	3,183	3,328	1,438	56
Louisiana	6,072	6,510	1,877	73
Arkansas	2,986	3,200	1,655	64
Southwest	31,502	33,471	2,166	84
Oklahoma	4,858	5,134	2,083	81
Texas	21,351	22,749	2,188	85
New Mexico	1,953	2,058	2,041	80
Arizona	3,340	3,530	2,233	87
Rocky Mountain	10,667	11,005	2,343	91
Montana	1,553	1,587	2,252	88
Idaho	1,366	1,398	2,020	79
Wyoming	834	837	2,441	95
Colorado	4,831	5,044	2,566	100
Utah	2,083	2,139	2,156	84
Far West	65,706	70,184	3,006	117
Washington	7,575	7,861	2,635	103
Oregon	4,568	4,876	2,606	102
Nevada	1,246	1,325	3,248	127
California	52,317	56,122	3,103	121
Alaska	704	779	3,116	121
Hawaii	1,667	1,807	2,622	102

* The estimates of "state personal income" shown in this table differ in definition in one respect from the personal income data in Table 3: the exclusion from the state estimates of income disbursed by the federal government to its civilian and military personnel stationed outside the United States. (Source: U.S. Department of Commerce.)

On a nationwide basis, per capita personal income (total income divided by total population) rose by almost 5% between 1963 and 1964, reaching $2,566. Differences among the states and regions in average income levels are recorded in Table 4.

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KEYSTONE

DURING INDIA-PAKISTAN WAR in 1965, Indian police comb a section of rail line between Delhi and Meerut in search of Pakistani troops reported dropped from air.

INDIA

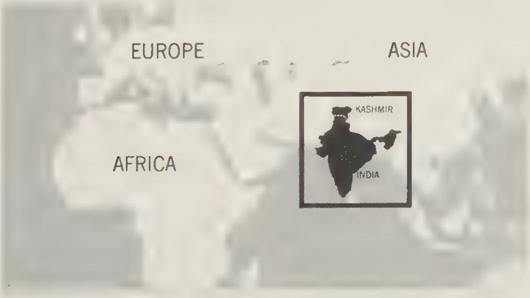
Armed hostilities between India and Pakistan dominated the Indian scene in 1965. They imposed new strains on India and raised grave questions for the future, but they also pushed serious internal difficulties into the background and seemingly strengthened the government of Prime Minister Lal Bahadur Shastri. Moreover, they created a new sense of national unity, determination, and purpose.

Shastri's sudden death, on Jan. 11, 1966, stunned the nation. The prime minister died of a heart attack in Tashkent, USSR, shortly after signing a troop withdrawal agreement with President Ayub Khan of Pakistan. Mrs. Indira Gandhi, daughter of the late Prime Minister Nehru, succeeded Shastri on Jan. 19, 1966.

INDIAN-PAKISTANI CONFLICT

The Rann of Kutch. The first armed clashes occurred in the Rann (marsh) of Kutch, a desolate area in the Indian state of Gujarat. Minor clashes and firings by border forces along the ill-defined frontier became numerous in early 1965, and in April both India and Pakistan sent units of their regular armed forces into the area. Pakistani troops, using American-made weapons and equipment, moved into Indian territory (according to Indian sources, at least), and seemed to put the Indian forces on the defensive. No decisive military engagements were fought, however. Sober second thoughts by the

INDIA · Information Highlights



Area: 1,227,275 square miles.
Population: 475,353,000 (July 1, 1964 est.).
Chief Cities (1964 est.): New Delhi, the capital, 294,565; Bombay, 4,537,926; Calcutta, 3,003,556; Delhi, 2,298,455; Madras, 1,833,504; Ahmedabad, 1,254,171; Hyderabad, 1,155,234.
Political Divisions: 16 states, 9 territories, and 1 protectorate (Sikkim).
Government: *President*—Sarvepalli Radhakrishnan; *Vice President*—Zakir Hussain; *Prime Minister*—Mrs. Indira Gandhi; *Parliament*—Rajya Sabha (Council of States), 238 members; Lok Sabha (House of the People), 508 members; *party seating* (Lok Sabha, 1963)—Congress Party, 359; Communists, 33; others, 116.
Religious Faiths: Hindus, 83% of population; Muslims, 11%; Christians, 2%; Sikhs, 2%; others, 2%.
Education: *Literacy rate* (1961)—28% of population aged 15 and over. *Total school enrollment* (1961–62)—51,149,536 (primary, 29,344,795; secondary, 20,313,910; technical-vocational, 442,307; higher, 1,048,524).
Finance (1965 est.): *Revenues,* $4,875,000,000; *expenditures,* $7,842,000,000; *public debt,* $19,736,000,000; *monetary unit,* rupee (4.7619 rupees equal U.S.$1).
National Income (1963): $36,134,000,000; average annual income per person, $79.
Economic Indexes (1964): *Industrial production,* 162 (1958=100); *agricultural production,* 123 (1956–57=100); *cost of living,* 130 (1958=100).
Manufacturing (metric tons, 1964): Cement, 9,690,000; coke (1963), 7,350,000; crude steel, 6,032,000; sugar, 3,033,000; wheat flour, 1,824,000; gasoline (1963), 1,399,000; cotton yarn, 964,800.
Crops (metric tons, 1964): Rice, 58,000,000 (ranks 2nd among world producers); wheat, 9,708,000 (world rank, 5th); peanuts, 5,791,000 (world rank, 1st); corn, 4,800,000 (world rank, 8th); barley, 1,985,000 (world rank, 9th); cottonseed (1963), 1,899,000 (world rank, 3rd); cassava (1963), 1,799,000 (world rank, 4th); tea, 373,700 (world rank, 1st).
Minerals (metric tons, 1964): Iron ore, 20,551,000 (ranks 7th among world producers); salt, 4,647,000 (world rank, 6th); manganese, 1,262,993 (world rank, 3rd); gypsum, 880,000 (world rank, 11th); bauxite, 591,000 (world rank, 15th); gold, 147,958 troy ounces (world rank, 14th).
Foreign Trade (1964): *Exports,* $1,749,000,000 (chief exports: tea, $87,600,000; jute manufactures, $83,600,000); *imports,* $2,610,000,000 (chief imports, 1963: unmilled wheat, $216,100,000; iron and steel, $188,300,000; crude petroleum, $97,000,000). *Chief trading partners* (1963): U.S. (took 17% of exports, supplied 34% of imports); Britain (took 21% of exports, supplied 15% of imports).
Transportation: *Roads* (1964), 464,949 miles (69,099 paved); *motor vehicles* (1964), 648,000 (automobiles, 373,000); *railways* (1963), 35,257 miles; *merchant vessels* (1964), 206 (1,431,000 gross registered tons); *national airlines,* Air India, Indian Airlines Corporation; *principal airports,* Bombay, Calcutta, Delhi.
Communications: *Telephones* (1964): 684,284; *television stations* (1964), 1; *television sets* (1964), 750,000; *radios* (1962), 3,072,000; *newspapers* (1962), 481.

two contending governments, and pressures from friendly nations—notably the United States and Britain—led to a cease-fire.

The cease-fire agreement, signed on June 30, became effective the following day. It had been worked out earlier in the month at the Commonwealth Prime Ministers Conference in London. India and Pakistan agreed to withdraw their forces from the entire border between the two countries. They also promised to seek a settlement of the Kutch border dispute at the ministerial level, and, and if these efforts failed, to refer the dispute to an arbitral tribunal. Although the ministerial meeting was scheduled for August, it was not held because of growing tension over Kashmir. Thus the Kutch dispute remained unsettled in 1965.

Kashmir. More important is the dispute over Kashmir, the northern state occupied partly by India and partly by Pakistan after the partition of the Indian subcontinent in 1947. In the fall of 1965, Kashmir became the scene of the most serious clash between India and Pakistan since 1948.

After an apparent improvement in Indian-Pakistani relations in the last months of Nehru's life and immediately after his death (May 27, 1964), tension between the two countries grew more severe than ever. When India took several steps to integrate its portion of Kashmir more closely into the Indian Union, Pakistan viewed these moves with indignation and alarm. On May 8, 1965, Sheikh Abdullah, the former prime minister of Kashmir, was apprehended by Indian authorities upon his return from a trip to the Middle East, North Africa, and Europe. He was confined to a hill station in southern India. This action provoked protests in Pakistan and demonstrations in the Indian-held part of Kashmir.

Clashes and incidents along the cease-fire line in Kashmir became more numerous in 1965. On August 5, large-scale infiltration into the Indian-held portion of the state began from the Pakistani side of the 1949 cease-fire line. This infiltration, which according to Indian sources involved 5,000 or 6,000 men, was the immediate cause of the military hostilities in August and September.

Open Warfare. On August 16, Indian troops moved across the Kashmir cease-fire line in three strategic places. On September 1, a Pakistani infantry brigade, spearheaded by American-built tanks, invaded the Jammu section of Indian-held Kashmir. Four days later, Indian troops drove into West Pakistan proper, threatening Lahore, and on September 8 they attacked far to the south, toward Karachi. Shortly thereafter the Pakistanis invaded the Indian states of Punjab and Rajasthan. Several military engagements were fought, without decisive results, although apparently both sides lost many tanks and planes, and much other military equipment. The period of active fighting was confined to a few days, and was followed by two weeks of virtual stalemate.

India was threatened with a new crisis and a possible escalation of the conflict on September 16, when Communist China delivered an ultimatum giving India three days to withdraw from fortified installations along the frontier between Sikkim, an Indian protectorate in the Himalayas, and Tibet, which is occupied by China. The Chinese claimed the installations were on their side of the boundary line. The crisis was over in a few days: when India stood firm, China retreated from its ultimatum and claimed that Indian forces had withdrawn from the disputed border installations.

Cease-Fire. On September 20, the UN Security Council, with the United States and USSR cooperating in an unusual display of concerted action, passed a strong resolution demanding that India and Pakistan agree to a cease-fire within three days. India acceeded promptly, and Pakistan acquiesced reluctantly at the last minute.

The cease-fire went into effect on September 23, in accordance with the United Nations resolution. It was an uneasy truce at best, and in the following weeks it was broken frequently by both sides. Neither India nor Pakistan withdrew its forces from the positions occupied after August 5, as each had agreed to do. But on Jan. 10, 1966, Shastri and Ayub Khan signed an agreement in Tashkent, USSR, providing for complete troop withdrawals by February 25. They also agreed to resume diplomatic relations and to renounce the use of force in settling disputes.

FOREIGN AFFAIRS

In 1965, India was so absorbed with its internal problems and its disputes with Pakistan that it gave relatively little attention to broader aspects of foreign policy.

Relations with Communist Countries. India's relations with Communist China remained strained, but aside from the Chinese ultimatum in September, no new crisis in these relations materialized. India was suspicious of China's apparent collusion with Pakistan, and of China's intentions in the Himalayan area. China's explosion of a second nuclear device in May, followed by its ultimatum in September, led to increasing pressure on Shastri from influential groups inside India, including members of his own party, to reverse his policy of not manufacturing atomic weapons. He refused to bow to these demands, although he made it clear that the question was continually under review.

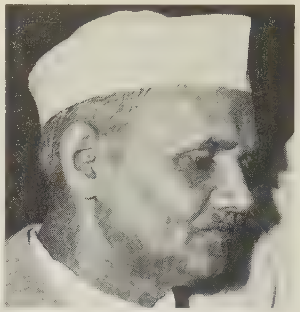
Relations with the Soviet Union continued to be good, although not really close. The warmth of Shastri's reception in the USSR in May contrasted pleasantly to President Johnson's postponement of a similar visit to Washington and created a very favorable attitude in India toward the Soviet Union. This feeling was reinforced by the willingness of the USSR to continue its economic and military aid to India throughout the crisis with Pakistan.

ON SIKKIM-TIBET BORDER, Indian army officer points to where Chinese troops (rear) opened fire in September.

WIDE WORLD

LAL BAHADUR SHASTRI was at the peak of his prestige as prime minister of India when he died on Jan. 11, 1966. His political position had been precarious in the first months of 1965 because of economic problems and widespread dissatisfaction that Hindi had been decreed the only official language. But he gained in stature later in the year for taking a firm stand toward Pakistan and Communist China during the Indian-Pakistani conflict.

Born in a village near Benares on Oct. 2, 1904, Lal Bahadur grew up in poverty. He adopted the name Shastri, which signifies academic achievement, when he graduated from Kashi Vidyapeeth University. Between 1921, when he joined Gandhi's noncooperation movement against British rule, and 1947, when India became independent, he spent nine years in prison for political activities. In 1951 he became secretary of the Congress party, and the next year he was named to the first of several cabinet posts that he held under Prime Minister Nehru. After Nehru's death, Shastri became prime minister on June 9, 1964.



PIX

Relations with the United States. President Johnson's request that Prime Minister Shastri postpone his state visit to Washington, scheduled for June, created considerable resentment in India. It led Shastri to announce on April 20 that he had canceled plans for the visit. But in the aftermath of the crisis with Pakistan, he reconsidered, and the trip was rescheduled for February 1966.

During the conflict with Pakistan, India's relations with the United States grew worse because of the suspension of U.S. economic and military aid. The failure of the United States publicly to condemn Pakistan's "aggression," coupled with Washington's alleged inclination to treat India and Pakistan on a similar basis during and after the conflict, further clouded Indian-U.S. relations.

Indians were incensed also by the refusal of the United States in June to renew a long-term agreement covering surplus food sales to India under the Food for Peace program. The United States extended the agreement on a month-to-month basis, making available 500,000 tons of grains at a time for purchase in Indian currency. This policy was intended to pressure India to increase its food production instead of relying so heavily (in Washington's view) on American food shipments. In December, President Johnson stepped up grain shipments to help alleviate the threat of famine in many parts of India. As a result, Indian-U.S. relations began to improve at the end of the year.

DOMESTIC AFFAIRS

Emergency rule in India, proclaimed immediately after the Chinese attack in late October 1962, continued throughout 1965.

Food Crisis. India's economic prospects were seriously blighted late in the year by the failure of the monsoon rains. The government called the drought "a natural calamity of a magnitude unknown in recent times." Because of the drought, food production was expected to be 7–10 million tons below the figure for 1964–65. This food loss would almost certainly mean famine conditions in many parts of India, and a serious internal crisis in the country as a whole.

Language Dispute. Hindi, the most widely spoken language of northern India, became the sole official language of the nation on Jan. 26, 1965. English was demoted to the status of an "associate language." The change provoked a wave of protests and riots, especially in the southern state of Madras. Two Indian government ministers resigned over the language issue on February 11. They withdrew their resignations when the government promised to support demands for constitutional restoration of English as an official language.

The "Syndicate." Although Prime Minister Shastri gained political prestige in 1965, real power seemed to rest with the so-called Syndicate. This inner group of Congress party leaders consists chiefly of party president Kamaraj Nadar and three other leaders: S.K. Patil, Sanjiva Reddy, and Atulya Ghosh. The politics and position of this group were sometimes openly criticized inside Congress party circles, most notably by Morarji Desai and some of his supporters at the party's annual session in January, and at the All-India Congress Committee (AICC) meeting in July. However, Desai's views did not prevail. In fact, the AICC approved a resolution permitting Nadar to be nominated for a second two-year term as Congress party president, beginning in December 1965.

State Politics. In various states, notably Kerala, Bihar, and Uttar Pradesh, the Congress party was faced with dissession within the top command and with defections of leading party members. Elections in Kerala in March left the political situation there still confused. The Congress party, whose ministry had resigned the previous September, was faced with formidable opposition, not only from "left-wing" Communists but also from dissident Congress party members, who united in what was called the Kerala Congress. The results of the election were a fresh blow to the Congress party, which won only 36 seats in the Legislative Assembly, as compared with 51 which it had held prior to the election. The Communists won 40 seats, and the Kerala Congress won 24. Because no party or coalition could form a government, president's rule, in effect since September, 1964, continued.

Economic Program. On February 27, Finance Minister T.T. Krishnamachari presented the general budget in the Lok Sabha (lower house of Parliament). The budget called for expenditures of $4.4 billion in the revenue account for the fiscal year 1965–66. Expenditures for defense were estimated at $1.5 billion, slightly higher than in 1964–65. To obtain the necessary revenue, Krishnamachari proposed increases in income and corporation taxes and in excise and customs duties. The capital budget envisioned an outlay of about $4.7 billion in the public sector for the last year of the third five-year plan (1961–66).

The outlines of the fourth five-year plan, to begin April 1, 1966, took specific shape in 1965. The draft plan called for total expenditures of $40–$45 billion, and for a heavy emphasis on agricultural development and related programs.

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INDIANA

A search, ultimately successful, for a legislative reapportionment formula held the spotlight in Indiana in 1965. Ten days before the General Assembly met on January 7, a federal circuit court overruled the Indiana Supreme Court and declared the 1963 legislative reapportionment act invalid.

Reapportionment. Before adjourning on March 8, the Democratic-controlled legislature approved a new legislative reapportionment. The state's 11 congressional districts were also reapportioned, for the first time since 1941. However, the circuit court declared the legislative reapportionment unconstitutional because of excess deviation from the "one-man, one-vote" principle and because it linked some urban and rural counties in districts in a manner that diluted the representation of the latter.

Gov. Roger D. Branigin then called the General Assembly into special session. During October the legislature approved four alternative reapportionment laws for each house and indicated the order of legislative preference. During November the federal court selected and upheld a reapportionment act for each house. Although not the initial choices of the legislators, these acts achieved the "one-man, one-vote" concept with less than 10% deviation in most instances. They also reduced the dilution of the voting strength of rural counties. Congressional reapportionment remained in effect.

Other Legislation. The regular session approved a biennial budget of $1.74 billion for 1965–67, compared with $1.44 billion for the preceding biennium. The 2% sales tax law was modified to exempt prescription drugs, the tax on cigarettes was raised, and the low-yielding state and local poll taxes were ended. Some $25 million was appropriated toward construction of a public port on Lake Michigan. A "right-to-work" law was repealed, and a minimum-wage law of $1 an hour was approved.

Economy. The Hoosier economy expanded amid continuing prosperity. Revenue from sales and other taxes exceeded budget estimates for the 1965 fiscal year. The increased acceptance by the state of federal funds for various purposes strengthened the state's fiscal position and boosted its economy. Governor Branigin took a number of steps to lower expenditures and encourage other economies.

Other Events. Tornadoes swept across central and northern Indiana on Palm Sunday (April 11), killing about 140 persons and destroying property worth millions of dollars.

The designation of New Harmony as a National Historical Landmark in August brought deserved recognition of the utopian experiments in communal living by the Rappites and Owenites.

In September, Clowes Hall, on the Butler University campus at Indianapolis, had the premiere performances of the newly organized Metropolitan Opera National Company.

The Indianapolis *Times* ceased publication in October after nearly 80 years of service to the city and state.

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INDIANA · Information Highlights

Area: 36,291 square miles.
Population: 4,914,000 (1965 est.).
Chief Cities (1965 est.): Indianapolis, the capital (530,000); Gary (179,000); Fort Wayne (172,000); Evansville (138,500); South Bend (135,000); Hammond (115,500); Muncie (70,500); Terre Haute (70,500).
Government: *Chief Officers*—governor, Roger D. Branigin (Democrat); lt. gov., Robert L. Rock (D); secy. of state, John D. Bottorff (D); atty. gen., John J. Dillon (D); treas., Jack L. New; supt. of pub. instr., William E. Wilson; chief justice, Amos W. Jackson. *Legislature*—General Assembly (convened Jan. 7, 1965); Senate, 50 members (35 Democrats, 15 Republicans); House of Representatives, 100 members (76 D, 22 R, 2 vacancies).
Education: *School enrollment* (1964–65)—public elementary, 719,622 pupils (23,530 teachers); public secondary, 431,059 pupils (18,440 teachers); nonpublic schools, 146,300 pupils (4,210 teachers); college and university (fall 1964), 127,954 students. *Public school expenditures* (1964–65)—$495,918,000 ($490 per pupil); average teacher's salary, $6,530.
Public Finance (fiscal year 1965): *Revenues,* $819,855,050 (2% sales tax, $145,423,595; motor fuel tax, $117,572,133; federal funds, $152,788,078). *Expenditures,* $795,078,582 (education, $302,748,660; health, welfare, and safety, $115,360,245; highways, $284,523,570). *State debt,* $456,037,500 (July 1, 1965).
Personal Income (1964): $12,273,000,000; average annual income per person, $2,544.
Public Assistance (fiscal year 1965): $59,867,033 to 72,572 recipients (aged, $22,474,602; dependent children, $16,983,319).
Labor Force (employed persons, June 15, 1965): *Agricultural,* 95,900; *nonagricultural* (wage and salary earners), 1,613,500 (41% manufacturing, 19% trade, 14% government). *Unemployed persons* (June 15, 1965)—58,000.
Manufacturing (1963): Value added by manufacture, $7,687,872,000 (transportation equipment, $1,092,402,000; primary metals, $1,417,541,000; nonelectrical machinery, $682,946,000; electrical machinery, $1,137,752,000; fabricated metals, $459,524,000; food and products, $611,228,000).
Agriculture (1964): *Cash farm income,* $1,280,324,000 (livestock, $674,211,000; crops, $528,366,000; govt. payments, $77,747,000). *Chief crops* (tons)—corn for grain, 9,457,000 (ranks 3rd among the states); hay, 2,403,000 (rank, 20th); wheat, 1,544,000 (rank, 9th); alfalfa, 1,440,000 (rank, 18th); oats, 245,000 (rank, 13th); apples, 55,200 (rank, 13th); rye, 22,000 (rank, 11th).
Mining (1964): *Production value,* $211,783,000 (ranks 23rd among the states). *Chief minerals* (tons)—coal, 15,075,000 (ranks 7th among the states); crude petroleum, 11,283,000 barrels (rank, 19th); sand and gravel, 24,416,000; stone, 22,318,000; clays, 1,545,000; peat, 66,568.
Fisheries (1963): *Commercial catch,* 1,634,000 pounds ($104,000).
Transportation: *Roads* (1965), 104,319 miles (97,492 paved); *motor vehicles* (1964), 2,527,530; *railroads* (1965), 7,772 miles; *airports,* 119.
Communications: (1965): *Telephones,* 2,137,300; *television stations,* 17; *radio stations,* 122; *newspapers,* 89 (daily circulation in 1964, 1,720,514).

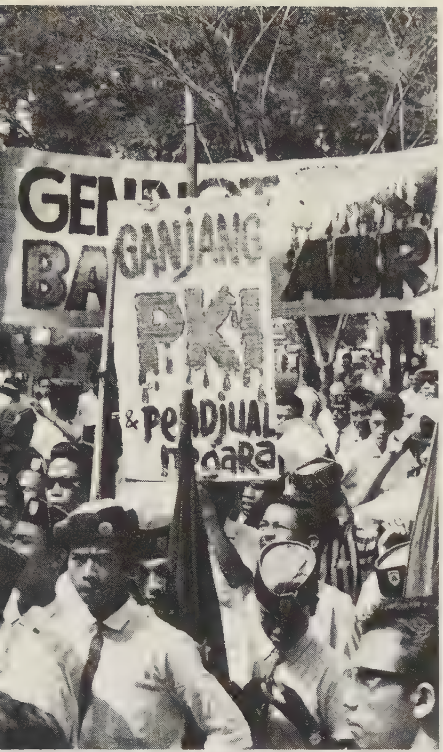
INDONESIA

Although 1965 opened with Indonesia's withdrawal from the United Nations and with a rapid deterioration in U.S.-Indonesian relations, the most significant developments of the year were domestic. The dominant fact of political life in Indonesia was the growing polarization between left and right. The left—mainly the Communist party (PKI) and its allies—had the advantage of President Sukarno's strong public support and appeared to be developing a momentum which would ultimately give it a dominant voice in the government. But on October 1 an abortive internal army coup against the general staff reversed this trend. The army high command, with strong Islamic and other conservative support, reacted violently. Blame was placed on the PKI, and within a month it was on the verge of annihilation.

Foreign Affairs. Indonesia's formal resignation from the United Nations on Jan. 21, 1965, had little permanent effect on either her internal prosperity or her foreign relations. Endemic hostility to the United States since America's covert intervention in the 1957–58 regional rebellion was further exacerbated by the Vietnamese war, which reminded many Indonesians vividly of their own past experience. In the spring of 1965 all American enterprises were put under government control or supervision. Repeated, massive anti-American demonstrations resulted in the closing of the U.S. Information Agency's services, the withdrawal of the Peace Corps, and a virtual end to other aid programs. Ambassador Ellsworth Bunker's April mission to Indonesia, as President

UPI

INDONESIAN DEMONSTRATORS attacked the Indian embassy in Djakarta on September 8, after Indonesia's Foreign Minister Subandrio charged India with naked aggression against Pakistan.



WIDE WORLD

ANTI-COMMUNIST DEMONSTRATION on October 8 was provoked by suspicions that the Indonesian Communist party (PKI) had participated in the attempted coup d'état of Oct. 1, 1965.

Johnson's special emissary, failed to check the continuing decline in relations between the two countries.

Although the Soviet Union continued to be the main supplier of arms to the strongly anti-Communist Indonesian army, prior to October 1 it was Chinese influence that expanded most rapidly, particularly within circles close to President Sukarno.

Although Indonesia carried on sporadic guerrilla incursions on the North Kalimantan (Borneo) frontier, confrontation with Malaysia was pursued mainly through diplomatic channels—and without much success. This lull was clearly in part the result of the deepening internal crisis. (See also ASIA.)

Internal Politics. In the fall of 1964 a group of right-wing newspaper editors banded together into the Body for Supporting Sukarnoism (BPS), with the intention of using Sukarno's name and writings to seize the ideological initiative from the PKI. With covert backing from the army, Islamic groups, and the tiny but influential Murba party, the BPS charged that atheistic communism was incompatible with Sukarno's public commitment to religion. A bitter press polemic ensued, which was not stopped until December 1964, when the BPS was first suspended and then banned by Sukarno, who accused it of being financed by the U.S. Central Intelligence Agency (CIA). Shortly thereafter he suspended the Murba

INDONESIA · Information Highlights

ASIA
AUSTRALIA

Area: 735,268 square miles.
Population: 102,200,000 (mid-1964 est.).
Chief Cities (1961 census): Djakarta, the capital, 2,906,533; Surabaja, 1,007,945; Bandung, 972,566.
Government: *President-Premier*—Sukarno (proclaimed himself president, Aug. 18, 1945; named president for life, May 20, 1963). *Parliament*—People's Consultative Congress, 616 members (including 283-member House of Representatives and regional and functional bodies).
Religious Faiths: Muslims, 85% of population; Hindus, 6%; Christians, 4%; others, 5%.
Education: *Literacy rate* (1961)—43% of population aged 15 and over. *Total school enrollment* (1961)—10,592,370 (primary, 9,642,886; secondary, 754,434; teacher-training, 38,593; technical, 90,822; university, 65,635).
Finance (1964 est.): *Revenues,* $1,241,000,000; *expenditures,* $1,245,000,000; *monetary unit,* rupiah (315 rupiahs equal U.S.$1).
Economic Indexes: *Agricultural production* (1964), 111 (1956–57=100); *cost of living* (1963), 1,254 (1958=100).
Manufacturing (metric tons): Gasoline (1963), 1,834,000; sugar (1964), 650,000; cement (1963), 330,000.
Crops (metric tons): Rice (1963–64), 11,764,000 (ranks 5th among world producers); cassava (1962–63), 10,976,000 (rank, 2nd); maize (1964–65), 3,505,000 (rank, 11th); sweet potatoes and yams (1963–64), 2,998,000; rubber (1964), 657,800 (rank, 2nd); peanuts (1963–64), 403,000 (rank, 8th); soybeans (1964–65), 400,000 (rank, 3rd); coffee (1964–65), 132,000 (rank, 7th).
Minerals (metric tons, 1964): Bauxite, 633,000 (ranks 14th among world producers); tin, 16,607 (rank, 5th); nickel, 1,600 (rank, 9th); crude petroleum, 170,739,000 barrels.
Foreign Trade (1963): *Exports,* $696,000,000 (chief exports: natural rubber and gums, $35,200,000; crude petroleum, $20,500,000); *imports,* $502,000,000 (chief imports, 1962: cotton fabrics, $9,200,000; rice, $8,800,000; iron and steel, $5,900,000). *Chief trading partners* (1962): U.S. (took 14% of exports, supplied 18% of imports); Japan (took 6% of exports, supplied 21% of imports); Britain (took 16% of exports, supplied 8% of imports).
Transportation: *Roads* (1964), 6,146 miles (2,799 paved); *motor vehicles* (1964), 300,000 (automobiles, 175,000); *railways* (1963), 3,788 miles; *national airline,* Garuda Indonesian; *principal airport,* Djakarta.
Communications: *Telephones* (1964): 149,090; *television station* (1964), 1; *television sets* (1964), 35,000; *radios* (1961), 1,250,000; *newspapers* (1959), 94.

WIDE WORLD

PRESIDENT SUKARNO of Indonesia endured a massive blow to his prestige when the leftist coup and rightest countercoup of Oct. 1, 1965, discredited his pro-Communist, pro-Peking policies and left him in charge of the government at the sufferance of the military. His personal popularity probably was unscathed, but his bid to lead the Afro-Asian bloc seemed lost. It was thought that the coup may have resulted from a premature scramble for succession.

Sukarno was born in Surabaja, Java, on June 6, 1901. Educated at the Technical Institute of Bandung, he soon forsook civil engineering and architecture to join the drive to end Dutch colonial rule. From 1926 until 1949, when the Netherlands recognized Indonesia's sovereignty, he was the embodiment of the nationalist movement. Seeking any means to independence, he collaborated with the Japanese during World War II. After their capitulation, he proclaimed Indonesia's independence on Aug. 17, 1945, with himself as president. On May 20, 1963, the People's Consultative Congress made him president for life.

party. Simultaneously the left made a renewed attempt to change the composition of the cabinet and especially to oust the strongly anti-Communist armed forces chief, General Nasution. Strong right-wing pressure, however, blocked this maneuver.

Meanwhile, endeavors by Communist-led peasants to enforce existing land-reform legislation stirred violent reactions among Islamic and other landlords. Open clashes broke out, particularly in East Java, where the Muslims had the ill-concealed support of local officialdom. In March 1965, a large Afro-Asian Islamic Conference held in Bandung found Indonesian Islam expressing a new militancy and unity in the face of the Communist challenge.

On May 23 the PKI held its 45th anniversary celebrations which, particularly in Djakarta, were unprecedented in size, discipline, and impressiveness. Not only did the popular president himself give a warmly approving opening address, but government agencies were instructed to give the PKI maximum assistance and publicity.

Encouraged by this success, the PKI stepped up its campaign to reduce the power of its ultimate adversary, the army high command. Working largely through Sukarno, the party pressed for the introduction of political commissars into the armed forces and the creation of a fifth force of volunteers, outside the regular army. The PKI hoped thereby to give its cadres officially sanctioned military training and thus perhaps deter the army from attempting violent repression after Sukarno's eventual death. At the same time the PKI sought to isolate the army from its civilian allies. It scored a major victory on August 4, when the left wing of the Nationalist party (PNI) purged all top leaders thought to be sympathetic to the army. On September 21, Sukarno acceded to PKI demands that he ban the Murba party completely.

The Abortive Coup. It was beginning to seem that the PKI's strategy of peaceful penetration of the government might be successful, when, early on October 1, six of the key generals on the general staff were kidnapped from their homes. Soon afterward Djakarta Radio announced the formation of a Revolutionary Council with supreme powers to forestall an alleged CIA-backed generals' plot to overthrow Sukarno. But within hours the army high command, led by General Suharto, regained control, and the rebels fled the capital.

While certain aspects of this affair remain obscure, it appears that the initiative came from a group of strongly nationalist middle-ranking army officers in central Java. This group, discontented with the general staff for its reputed corruption, links with the West, and known coolness to many of Sukarno's policies, found allies among anti-army elements in the air force. Although the PKI leadership was kept in ignorance of what was afoot, these air force elements did distribute about 3,000 small arms to Communist youth volunteers whom they had been training. On October 2 the main Communist newspaper came out in limited, bewildered support for what it still evidently saw as merely the arrest of its main political opponents. But this was enough for the enraged army. When the bodies of the kidnapped generals were discovered on October 3, the military high command launched a massive campaign to fix blame for the murders on the PKI.

Within a few weeks PKI activity was banned in all regions, the party press was closed down, and thousands of party members were jailed. In spite of Sukarno's public opposition, the army subsequently began the systematic obliteration of the left. It is reliably estimated that by February 1966, well over 300,000 men, women, and children had been slaughtered by the army or by Muslim and other army-inspired vigilante groups.

Also in defiance of the president, the army launched an anti-Chinese campaign, accusing Peking of having backed the abortive coup. Incited by the army-controlled press and radio, militant Muslim groups conducted violent attacks on locally born Chinese. The once close Djakarta-Peking entente thus appeared to have disintegrated completely.

The Aftermath. The appointment on December 14 of a three-man executive body, led by General Nasution and assuming many of the cabinet's vital functions, indicated that power in Indonesia had largely shifted out of the presidential palace and into the headquarters of the general staff. Yet in spite of the virtually dictatorial powers it had gained, the army high command faced serious problems. Military rule has neither traditional nor ideological legitimacy in Indonesia. Nor have the generals worked out any stable relationship with Sukarno and the political parties. Without the restraint exercised by a strong left wing there is a real danger of the government degenerating into a rigid, bureaucratic autocracy without any but the most conservative public support.

At the same time the national economy had come very close to breaking down. Rice prices quadrupled between July and November 1965. While industrial and communications equipment continued to decay, exports remained stagnant. The most critical question about Indonesia's future is whether the army leadership can create any kind of constructive political settlement, while tackling the uphill task of restoring and developing a ruined economy.

BENEDICT R. O'G. ANDERSON
Cornell Modern Indonesia Project
Cornell University

INDUSTRIAL HEALTH AND SAFETY

Problems in industrial health and safety arising from dusts, gases, and other harmful byproducts of industry continued to be analyzed by scientists and medical experts in 1965. Public concern and the work of health organizations have led to a broadened effort to understand the effects of these byproducts on health. New directions in environmental and occupational health research are expected to result in important changes in future industrial health and safety practices.

Environmental Health. A study of air samples and biological specimens from Los Angeles, Cincinnati, and Philadelphia was reported at the 1965 meeting of the American Industrial Hygiene Association (AIHA). This study was performed jointly by the U.S. Public Health Service's Division of Air Pollution and by industrial representatives.

Because of the increasing number of cars on congested highways, scientists in industry and government have maintained a careful surveillance of lead in urban air. They have concluded that, at the present low levels of pollution, no public health problem exists. Nevertheless, the California Institute of Technology announced that Dr. Claire C. Patterson has calculated that "pre-industrial" levels of human lead absorption may have been 100 times lower than those that existed in 1965.

In August 1965, plans for a National Environmental Health Sciences Center (NEHSC) were announced by U.S. Surgeon General Luther L. Terry (who retired later in the year), on his visit to the proposed site in the vicinity of Raleigh, N.C. The new NEHSC will undertake more complex studies than any currently being performed by industry, universities, or government. The increased depth and scope of these studies will include the full consideration of all environmental aspects of human ecological systems—total man in the total environment.

Occupational Health. Theodore F. Hatch, chairman of the Occupational Health Subcommittee of the Gross Committee, called for new concepts, principles, and practices if the course of chronic illness in the aging population is to be altered. Whatever the cause (heritage, childhood environment, present home and community environment, downward movement in socioeconomic class because of sickness, or job risk), it is evident that various groups have greatly different "stores of vitality" and therefore present different problems for maintaining health.

Industrial Toxicology. The Committee on Threshold Limit Values of the American Conference of Governmental Industrial Hygienists announced the tentative lowering of the maximum acceptable value for concentrations of carbon monoxide and phosgene in the air. The value for carbon monoxide was lowered from 100 to 50 ppm (parts per million) and the value for phosgene was lowered from 1.0 to 0.1 ppm.

The AIHA issued new guidelines on the uses and effects of allyl glycidyl ether, arsenic and its compounds (except arsine), beryllium and its compounds, carbon dioxide, carbon monoxide, chlorodiphenyls, 1,2-dichloroethane, diphenyl, ethyleneamine, fluoride-bearing dusts and fumes, iodine, lithium hydride, nitric acid, tetranitromethane, 2, 4, 6-trinitrotoluene, and vinyl chloride. Publications issued by the Industrial Hygiene Foundation listed existing threshold limit values, emergency exposure limits, and hygienic guides for 1965.

The first in a series of AIHA monographs on industrial hygiene aspects of the U.S. atomic energy program was published in 1964. The monograph, *Pulmonary Deposition and Retention of Inhaled Aerosols,* was written by Theodore F. Hatch, professor of industrial health engineering, Graduate School of Public Health, University of Pittsburgh, and by Dr. Paul Gross, director of the research laboratory, Industrial Hygiene Foundation. It presents in detail the important factors that determine why one exposure may be dangerous and another may be harmless. (See also POLLUTION; PUBLIC HEALTH.)

UPI

SMOG—byproduct of an industrial society—is an increasing health hazard in major urban centers such as Los Angeles.

ROBERT T.P. deTREVILLE
Managing Director
Industrial Hygiene Foundation of America, Inc.

INDUSTRIAL PRODUCTION

Industrial production in the United States continued to rise in 1965, the fifth consecutive year of such expansion. The Federal Reserve seasonally adjusted production index climbed to successive new peaks each month from January through August. In September, for the first time in 11 months, the index fell slightly—less than 1%—because of a sharp cutback in iron and steel output and temporary work stoppages that curtailed aircraft, auto, newspaper, and coal production. However, the index moved upward again in each of the last three months of the year, reaching a December peak of 148.3, or 48.3% above the 1957–1959 average. The December 1965 index stood 7.4% above that of December 1964. For all of 1965, the index averaged 143, or 8% above 1964.

The increase in output reflected strong demand from consumers and business. Consumer demand was further stimulated in April 1965 by the elimination or reduction of federal excise taxes on a wide variety of consumer goods.

New production highs were recorded in 1965 by all four broad industry groups—durable goods, nondurable goods, mining, and utilities. Durable goods, led by the machinery and automobile industries, paced the 1965 production rise with a 10% gain, one of the largest year-to-year gains in the postwar period. Nondurable goods output rose 6%; mining, less than 3%; and utilities, 7%, about equal to the average gain of the past five years. Production in all major industrial divisions advanced from 1964 to 1965, and in all cases it exceeded the output in any previous year.

The output of business equipment (for industry, commerce, transportation, and farms) rose 10%, and accounted for most of the 7% gain in final products. The other component of final products—consumer goods (automotive products, home goods and apparel, and consumer staples)—rose less than 6% despite fairly large gains in the auto and radio-TV groups. The output of materials for further processing increased 8%.

Despite the sizable production gain, manufacturing industries fell short of their full production potential. In mid-1965, U.S. manufacturing plants operated at 90% of capacity, the highest rate since 1955 and some 2% above December 1964, but still below the preferred rate of 92%.

Durable Manufactures. The steel industry recorded a record production year in 1965 despite a relatively low fourth quarter. Developments in the labor-management contract talks caused steel output to fluctuate. During most of the period of negotiations, ingot steel was produced at an annual rate of 140 million tons. With the signing of a new contract early in September, steel users began to reduce their stocks of steel built up earlier as a safeguard against shortages if a strike developed. As a result, producing mills cut back production sharply to an annual rate of about 110 million tons in October—a drop of more than one fifth. Production for all of 1965 totaled 131.2 million tons, which compared with 127 million tons in 1964.

U.S. INDUSTRIAL PRODUCTION INDEX
(1957–59 = 100)

	1963	1964	1965
Industry Groupings			
Industrial production, total	124	132	143
Manufacturing, total	125	133	145
Durable manufactures:			
Primary metals	113	129	147
Fabricated metal products	123	133	148
Machinery	129	141	160
Nonelectrical machinery	127	142	160
Electrical machinery	132	141	159
Transportation equipment	127	131	149
Motor vehicles and parts	146	150	175
Aircraft and other equipment	110	112	124
Instruments and related products	130	136	151
Clay, glass, and lumber	114	121	127
Furniture and miscellaneous	129	138	151
Total durable manufactures	124	134	148
Nondurable manufactures:			
Textile, apparel, and leather	118	125	135
Paper and printing	120	128	135
Chemicals, petroleum, and rubber products	142	152	164
Foods, beverages, and tobacco	117	121	123
Total nondurable manufactures	125	133	141
Mining			
Coal	102	107	112
Crude oil and natural gas	108	110	112
Metal, stone, and earth minerals	112	118	125
Total mining	108	111	115
Utilities, total	140	151	161
Market Groupings			
Total index	124	132	143
Final products, total	125	132	142
Consumer goods	125	132	140
Equipment (including defense)	124	132	147
Materials	124	133	144

Source: Board of Governors of the Federal Reserve System.

Supplies of nonferrous metals expanded in 1965 as the result of higher domestic production and increased imports. Metal producers operated at or near capacity levels. New production peaks were registered for such major metals as aluminum, copper, and zinc. The tightness in the supply-demand position that prevailed for copper, lead, and zinc in the last half of 1964 generally continued in 1965.

Output of building materials generally followed the course of activity in the construction industry, which reached a high level in June and changed little thereafter. Lumber production, after rising in the early months of 1965, dipped somewhat. Output of clay and glass products increased moderately.

The machinery industry showed outstanding strength in 1965. This industry, which produces electrical and nonelectrical machinery and equipment, recorded an advance of 13% from 1964 to 1965. (From 1963 to 1964 the increase was less than 10%.) The production increase in the machinery industry was the largest recorded by the 20 major manufacturing industrial groups of the Federal Reserve index, and it accounted for nearly three points of the 11-point advance in total industrial production.

The enlarged output of the machinery industry reflected the substantial expansion in private business outlays for new plants and equipment, which have run at record levels in recent years. These outlays totaled $50.9 billion in 1965, up $6 billion from the amount spent in 1964.

Electrical and nonelectrical machinery shared about equally in the advance. The rise in output was above average for some machinery lines, especially industrial equipment, which benefits from expenditures for plant expansion.

The electrical machinery industry benefited from the substantial increase in production of color television sets, which was almost double the 1964 volume of nearly 1.4 million units. This advance was achieved without any loss of production in black and white sets, which remained at the record-setting 1964 level.

The automobile industry registered new production records in 1965. Assemblies of passenger cars and trucks either exceeded or barely missed the million-unit mark each month except during the model-changeover period in the summer. For 1965 as a whole, production totaled 11.1 million units—the largest number ever produced—of which 9.3 million were passenger cars. In 1964 the figures were 9.3 million and 7.8 million units, respectively.

In the aircraft, shipbuilding, and railroad equipment industries, production rates changed little in the early months of 1965, but then moved noticeably upward, for a September index substantially above that of September 1964. Most of the expansion occurred in the aircraft and parts industry, which has been strongly supported by a rising volume of new orders and an increasing backlog of old orders for both military and civilian planes.

On the other hand, the output of railroad equipment increased only moderately over the high rate established in 1964, which, in turn, was the highest since 1957. However, new orders for freight cars were large, and backlogs rose from 31,000 in December 1964 to 42,000 in September 1965—the highest number of backlog orders since early 1960.

Nondurable Manufactures. The production gain in nondurable goods between 1964 and 1965 approxi-

U. S. CENSUS OF MANUFACTURES, 1963

Industry Group	Number of employees	Payroll (millions)	Value added by manufacture (millions)
All manufacturing establishments, including administrative and auxiliary units, total	17,065,000	$99,725	$190,395
Operating manufacturing establishments	16,352,000	93,354	190,395
Nondurable goods	7,045,000	35,630	82,551
Meat and dairy products	557,000	3,022	6,177
Food crop products	803,000	4,088	10,768
Beverages, candy, and tobacco	358,000	1,899	6,098
Textile and leather products	1,202,000	4,651	8,269
Apparel and related products	1,300,000	4,480	7,792
Paper and allied products	589,000	3,508	7,295
Printing and publishing	919,000	5,542	10,494
Industrial chemicals	386,000	2,758	9,034
Chemical products	363,000	2,265	8,466
Petroleum and coal products	153,000	1,133	3,568
Rubber and plastics products	417,000	2,363	4,590
Durable goods	9,307,000	57,724	107,844
Lumber and wood products	602,000	2,367	4,205
Furniture and miscellaneous	775,000	3,562	6,637
Stone, clay, and glass products	585,000	3,248	7,223
Iron and steel industries	821,000	5,753	10,969
Nonferrous metal industries	299,000	1,916	3,980
Construction metal products	536,000	3,124	5,755
General metal parts	559,000	3,324	6,111
Manufacturing machinery	661,000	4,430	7,678
Other nonelectrical machinery	802,000	5,150	9,221
Communication products and parts	793,000	4,833	8,064
General electrical products	679,000	4,015	8,269
Motor vehicles and equipment	697,000	5,218	12,687
Aerospace and transit equipment[1]	1,043,000	7,846	11,562
Instruments and selected ordnance products[1]	455,000	2,935	5,486
Administrative and auxiliary[2]	713,000	6,371	. . .

[1] Establishments owned and operated by the U.S. government are excluded. [2] Includes storage warehouses, power plants, research laboratories, etc., that serve a company rather than the general public. Source: U.S. Department of Commerce, *1963 Census of Manufactures*.

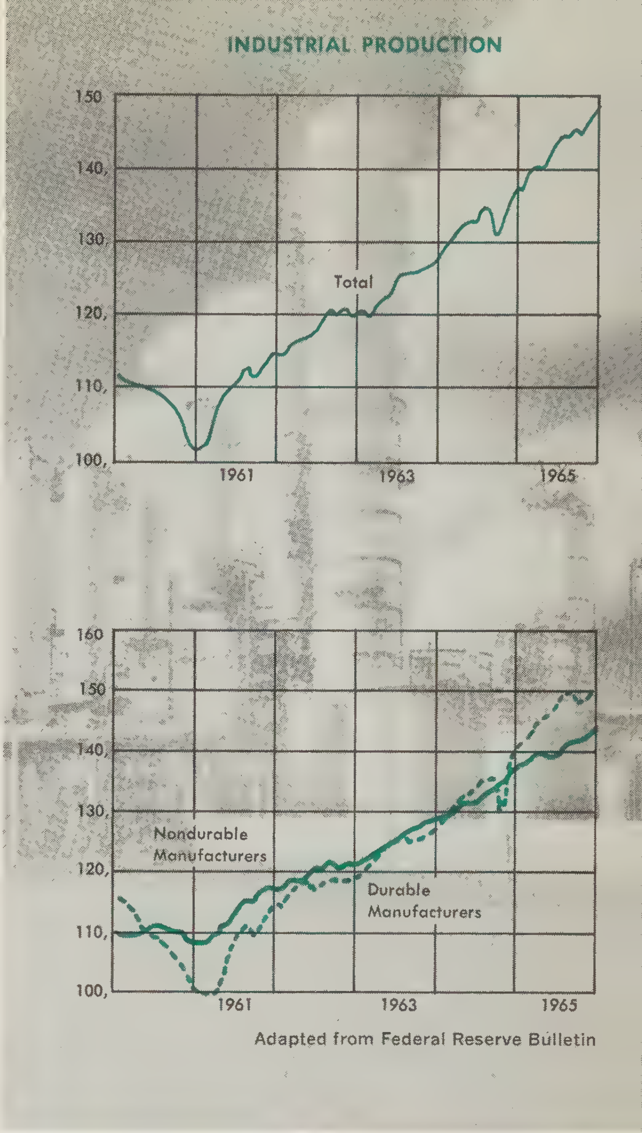
mately matched the gain between 1963 and 1964. Output rates in midsummer reached new highs or ran close to earlier highs for all industry groups except leather and tobacco products. Among nondurables, textiles, apparel, and rubber and plastic products showed the greatest growth in 1965, with an increase of about 10% each.

Textile output has expanded since 1960. The increase in output from 1964 to 1965 was the largest during the upward business cycle of 1961–65, and came close to the large increase registered in 1959. (The 1959 rise stemmed from the industry's sharp recovery after the relatively depressed volume of the 1958 recession period.)

The most important factor in the 1965 increase was the strong demand for apparel, home textile furnishings, and industrial fabrics. Special congressional legislation in mid-1964 to reduce the cost of raw cotton to domestic users also contributed to the rise.

Small month-to-month gains in apparel output lifted the August index to 144.8 (1957–59=100). The expansion in output considerably exceeded the gain in apparel sales at retail stores, with the result that inventories accumulated at a fairly rapid rate.

In both the paper and chemical industries, output expanded further. Growth in the chemical industry continued to be influenced by the development of new production techniques and new uses of some important products. Thus, the annual rate of increase in output since 1960 has been nearly 20% for plastic materials and about 15% for man-made noncellulosic fibers. Output in typically slow-growing industries, such as petroleum products, foods, beverages, and tobacco products, registered only nominal gains over the 1964 level.



Adapted from Federal Reserve Bulletin

UNION CARBIDE PHOTO

AMERICAN INDUSTRY produced 8% more goods in 1965 than in 1964 as the business upsurge extended through its fifth year. Led by the machinery and automobile industries, durable goods manufacturing rose 10% during the year, and advanced even faster than nondurable—or soft—goods.

Minerals. The output of minerals continued to expand in 1965 at about the same rate as in 1964. Despite some temporary work stoppages, the production of bituminous coal increased 3% in 1965, to a total 509 million tons—the fourth consecutive year of higher output. Since coal exports in 1965 held about even with that of 1964, increased domestic consumption accounted for all of the gain. The petroleum industry continued to follow the pattern of moderate year-to-year gains that has been characteristic of the entire post-World War II period. Production rates for metal, stone, and earth minerals ran well ahead of 1964 levels.

Utilities. The monthly output of utilities generally moved upward. In September the rate was about 9% above the 1964 average.

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U.S. Department of Commerce

INDUSTRY. See INDUSTRIAL PRODUCTION; and articles on industries.

INLAND WATERWAYS. See CANALS.

INSURANCE

Brisk sales of life, health, and property liability insurance during 1965 reflected a sound United States economy, and the entry of a record number of young adults into the prime protection years. This article reviews major developments in the insurance field under the following headings: (1) Life Insurance; (2) Health Insurance; (3) Property and Liability Insurance.

LIFE INSURANCE

United States life insurance companies during 1965 paid a record $11.4 billion in benefits to American policyholders, and in death payments to their beneficiaries. More than 90% of the life insurance owned in the United States is with legal reserve life insurance companies. American families owned an additional $55 billion of life insurance provided through the Veterans Administration, fraternal societies, assessment associations, and savings banks.

New Purchases. Purchases of new life insurance during 1965 set an annual record. About 27 million individual policies and group certificates were issued, for a total of more than $142 billion in new coverage. At the beginning of 1966, families with life insurance had an average of $18,400 of protection. The total of life insurance owned neared the $890 billion mark, a new record.

New purchases of group life insurance, for the most part issued through employers and unions, totaled over $52 billion in 1965. This total includes $28 billion in Servicemen's Group Life Insurance, issued to men and women in the armed forces. Among civilians, purchases of group life insurance was 9% ahead of 1964.

Over 7 million American workers were covered under insured pension plans at the end of 1965. The year's increase in number was the largest for any one year.

Investment. At the beginning of 1966, the total invested assets of the more than 1,625 legal reserve life insurance companies rose to nearly $160 billion. The net earning rate on these funds, invested primarily in corporate securities, mortgages, and government and municipal bonds, was about 4.6% at the beginning of 1966.

Canada. Canada has the world's highest ratio of life insurance ownership to national income. At the beginning of 1966, Canadian families owned $72 billion of life insurance under more than 22 million policies and group certificates. About $875 million was paid in 1965 to Canadian life insurance policyholders, beneficiaries, and annuitants.

BLAKE T. NEWTON, JR.
President, Institute of Life Insurance

HEALTH INSURANCE

At the end of 1964, over 151 million persons in the United States, or 79% of the civilian population, were protected by hospital expense insurance. This was an increase of some 4 million during the year. Of those with hospitalization insurance, 93% also had surgical expense insurance, and 72% had regular medical (nonsurgical) protection.

Between 1954 and 1964, the number of persons protected by hospital expense plans increased by 50 million, and the number of persons covered by surgical insurance increased from 86 million to nearly 141 million. In addition, the number of persons covered by regular medical protection increased from about 47 million to nearly 109 million.

Policies. More than 900 insurance companies issue health insurance policies in the United States. At the end of 1964, these policies protected over 93 million persons for hospital expenses, over 89 million for surgical expenses, and 55 million for regular medical expenses. Insurance companies also provided major medical expense insurance to 47 million persons, compared with 2 million in 1954. This insurance provides benefits up to $10,000 or more to help pay for virtually all medical care, either in or out of the hospital, prescribed by a physician.

Benefits. Health insurance benefits totaling $8.7 billion were paid by all types of insuring organizations in 1964, compared with $7.8 billion in 1963. The 1964 total included over $4.6 billion paid by insurance companies.

Loss-of-Income Policies. Coverage under loss-of-income insurance provides benefits that help replace income lost because of disability. In 1964, 36 million persons were protected in this way by insurance companies. Of the total employed U.S. civilian labor force in 1964, an estimated two thirds (48 million persons) were protected by loss-of-income policies or by other formal salary-continuation plans. Insurance companies paid over $1 billion in loss-of-income benefits in 1964.

JAMES R. WILLIAMS
Vice President and General Manager
Health Insurance Institute

PROPERTY AND LIABILITY INSURANCE

The volume of premiums written by capital stock property and liability insurance companies rose more than 6% during the first half of 1965. Expenses continued to be reduced, but higher losses on claims kept underwriting results in the red, as they have been since 1955.

Fire and Other Hazards. In the first six months of 1965, estimated losses caused by fires in the United States totaled $752,863,000, representing an increase of 4% over the comparable period of 1964. Estimated fire losses for the month of June 1965 totaled $119,538,000, a jump of 2.2% over May, and 10.1% over June 1964. Extended coverage losses caused by windstorm, explosion, and certain other hazards totaled $1,261,894,000 in the 12 months ending June 1965, compared with $1,037,003,000 in the preceding 12-month period.

Crime Losses. Since 1958, crimes against property have risen 46%, with the result that crime has become a major insurance problem. In the first six months of 1965, automobile thefts, for example, soared 12.4% over the same period a year earlier, and auto thefts numbered 249,650.

Riots in Los Angeles in August resulted in millions of dollars of property damage. Some estimates place the insured damage alone at $44,000,000.

Nuclear Energy Insurance. Property and liability companies are increasing the amounts of protection available to nuclear energy facilities. Beginning Jan. 1, 1966, stock and mutual pools will grant liability coverage up to $74 million for each nuclear facility, compared with the $60 million previously offered. At the same time, property coverage is expected to increase to $72 million per installation.

J. DEWEY DORSETT
President, American Insurance Association

INTER-AMERICAN AFFAIRS. See LATIN AMERICA.

MODERN RETREAT for Sybil Burton Christopher was designed by J. Frederick Lohman. The tiled pool shown at the left contains tropical fish. The "op" art construction by Karl Mann on right wall adds a touch of bright color to the predominantly all-white room.

UNITED STATES RUBBER COMPANY

INTERIOR DECORATION

Interiors designed for large public and commercial buildings dominated the news in interior decoration in 1965.

Public Buildings. With the opening in 1965 of the Los Angeles Museum of Art in three handsome pavilion-like structures, California's largest city became the unofficial artistic capital of the Far West. It was the largest art museum built in the United States since the National Gallery was completed in Washington, D.C., in 1941. The firm of William L. Pereira & Associates was the architect, with James H. Laugeheim as the partner-in-charge. Coordination of all interior furnishings was under the direction of Cannell & Chaffin.

Another important opening in 1965 was that of the Pavilion of the Los Angeles Music Center, with building design and interiors by architects Welton Becket & Associates.

The Mesda Museum building, of the Museum of Early Southern Decorative Arts in Winston-Salem, N.C., was opened in 1965. The principal function of Mesda is to preserve antiques associated with Old Salem, founded in 1766. The museum is also dedicated to the study of handcrafts by early cabinetmakers, metalsmiths, artists, and potters.

The year also marked the opening of Lyndhurst, a house in early Victorian "Gothick" style located on the Hudson River near Tarrytown, N.Y. The house was designed in 1838–41 by the architect A.J. Davis, who also designed much of its furniture. It was left as a public museum by the late Anna Gould, Duchesse de Tallerand-Périgord, in memory of her parents. The Committee on the Restoration of Historic Interiors of the National Society of Interior Designers contributed advisory service and helped with the details of the interiors, from plans prepared by the National Trust. The plans were designed not to "restore" but to "preserve" the house and its furnishings as they were during the last years of occupancy by the donor.

Commercial Buildings. Interiors of the new San Francisco Hilton Hotel, which has 17 floors and 1,200 guest rooms, were designed by David T. Williams. Decorative lighting and painted murals were effectively combined in the dining room and in the lounges.

VICTORIAN DEN for Barbra Streisand's apartment, designed by Charles F. Murray, was one of the "Ten Best Dressed Rooms" exhibited at the National Design Center in New York. The walls, corduroy drapes, and velvet sofa are in tones of deep burgundy.

NATIONAL DESIGN CENTER

In Honolulu, the Ilikai, a condominium apartment-hotel overlooking the yacht harbor, was completed in 1965. The interiors were designed by The Designers, Inc.

Another hotel completed in 1965 was The Lodge of the Four Seasons, at Lake Ozark, Mo. Its interiors, in Western Spanish style with overtones of modern décor, were by Integrated Design Associates.

The Warwick Hotel, opened in Houston, has interiors designed by David T. Williams, except for some public areas by Frank Cuse and guest rooms by Maude McCullough. The hotel combines antique paneling with antiques and modern furnishings.

Seattle's Edgewater Inn, with interiors designed by Nancy Pope of the Maxwell Co., is in contemporary style traditionally slanted. The Kent Country Club, in Grand Rapids, Mich., used 18th century traditional design, planned by Irene Reed Badgley of Gertrude Muir Interiors.

The challenge confronting designers working on interiors of office buildings was met by Mildred English, Inc., in the offices for the 19-story Petroleum Building in Bartlesville, Okla. Designs for Dining, model public dining rooms by Everett Brown Associates for the National Hotel and Motel Association, showed new ideas in public rooms.

Art Nouveau. There was a resurgence of *Art Nouveau* styles in 1965. Wallpapers, fabrics, and lamps in that style were seen in a reproduction of Maxim's de Paris Restaurant, in Chicago, by Arne Bronton of Albert Pick Co., and in Palmer's Pub, also in Chicago, designed by Idea Associates.

The film *My Fair Lady*, with costumes and interiors in the *Art Nouveau* style by Cecil Beaton, was acclaimed for its correct period sets. Wallpapers, fabrics, and furniture were faithfully reproduced from documentary sources supplied by Clarence House.

Furniture Design. In furniture, authentic reproductions by di Lucca, Inc., were characterized by fine cabinetwork and carving. Superb styling was found in pieces by Roundtree and in the *faux bamboo* carved wood furniture, with caned seats and backs fitted with shaped box cushions, by Meyer-Gunther-Marini.

Fabrics, Wallpapers, and Rugs. A new dimension in fabric design was seen in the collection by Jack Lenor Larsen, patterned after African primitive designs. Authentic museum reproductions were found in both wallpapers and fabrics. These included wallpapers by William J. Galligan in his "Heritage" collection, and in fabrics by Greff, including the American Legacy collection and the Henry Ford Museum reproductions. Eleven designs by Stroheim & Romann were taken from fabric designs in Cooper Union Museum documents. Fabrics and wallpapers were reproduced by Brunschwig & Fils for the restoration of Old Salem.

For those seeking enduring elegance in rugs, there were luxurious handwoven velours in designs adapted from museum documents, such as the superb needlepoint examples by Patterson, Flynn & Johnson. Rugs in modern exciting patterns were designed by Dorothy Liebes for Bigelow Sanford.

Rug Design Scholarships. A $5,000 scholarship fund was established at the Parsons School of Design by Edward Fields, custom rug manufacturer, for students doing advanced work in carpet design.

Awards and Conferences. The American Institute of Interior Designers (AID) presented its International Design Awards at the 20th annual awards dinner, held in Chicago. Fourteen new products, selected from 400 entries from the United States and abroad, were honored for their attractive designs. The award-winning products were later exhibited throughout the United States. The AID held its 34th annual conference in New York City, and the National Society of Interior Designers held its 2nd annual conference in Washington, D.C.

LEE CANNON
Managing Editor, "Interior Design" Magazine

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT. See INTERNATIONAL FINANCE.

INTERNATIONAL COURT OF JUSTICE. See INTERNATIONAL LAW; UNITED NATIONS.

CITY APARTMENT designed for television star Merv Griffin by John Elmo includes a dining area paneled in red oak to provide a warm setting for the antique dining set. The fireplace in the stucco divider wall can be used either from the dining area or from the living room.

UNITED STATES PLYWOOD CORPORATION

INTERNATIONAL FINANCE

Events and trends in international finance in 1965, including the much-discussed "liquidity problem," are reviewed in this article under the following headings: (1) International Financial Developments; (2) World Bank; and (3) International Monetary Fund.

INTERNATIONAL FINANCIAL DEVELOPMENTS

Despite continuing problems, the international exchange markets achieved more stability in 1965 than in recent years. At the beginning of the year there was an atmosphere of hesitancy arising from four major problems: (1) uncertainties about the prospects for improving the U.S. balance of payments; (2) a difficult liquidity situation that has raised doubts about the future structure of the international monetary system; (3) Britain's sterling exchange crisis of November 1964; and (4) doubtful prospects for other major currencies, such as the Italian lira and Japanese yen. Most of these problems abated, however, during 1965.

U.S. Balance of Payments. For years the U.S. balance-of-payments problem has caused concern, not only at home but also in financial circles in other countries. The U.S. position has remained adverse even though the nation's exports have been greater than its imports. In addition, receipts on interest and dividends; insurance transactions; legal, scientific, and other technical services; and film royalties have all been greater than payments to foreigners on these accounts. However, the high levels of income and savings in the United States, coupled with the great demand for investment in Europe and the less-developed countries, have led to a net flow abroad of American investment that is greater than the net receipts on ordinary transactions. For years, therefore, taking all accounts together, the United States has made net payments to foreigners, part of which have left the country in the form of gold.

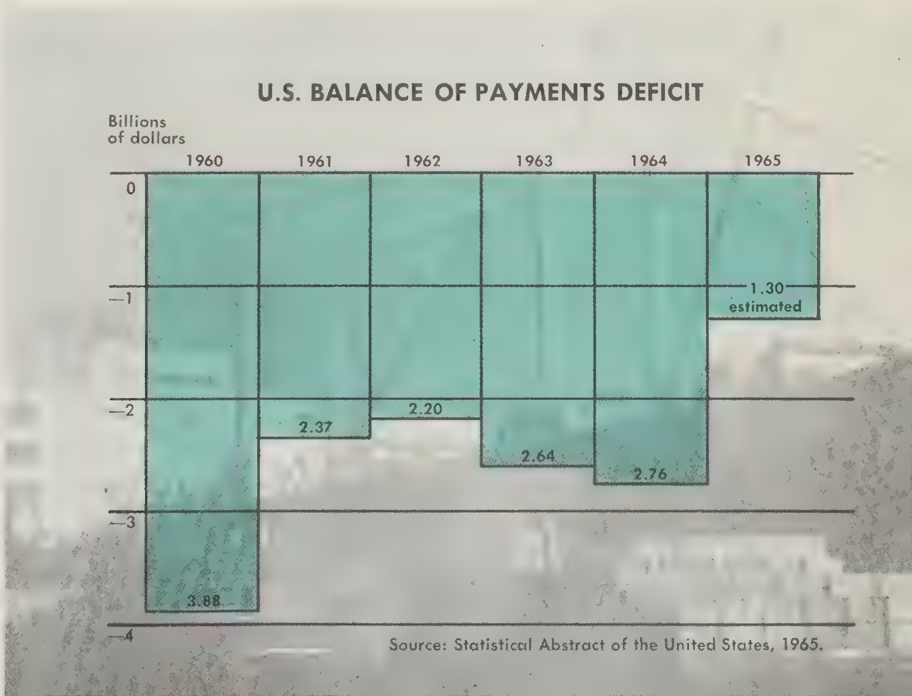
In 1965 there were definite signs of improvement in the U.S. balance of payments, and although the problem could not be considered solved, it appeared to be less intractable at the end of the year. The outflow of investment funds had been curtailed, both by changing circumstances in domestic financial markets and by new government policies in international finance.

The steady progress of the U.S. economy and the great demand for credit served to attract funds for investment within the United States. American companies which earlier had been attracted to foreign investment became more interested in expanding their home investment. Not only did investment within the United States appear to be more profitable, but, at the same time, investment in Europe appeared to be less attractive. The rise in U.S. interest rates also encouraged American companies doing business abroad to borrow in foreign capital markets rather than at home to finance their overseas activities. Hence, the outflow of funds for foreign investment declined. As a consequence, one of the important pressures on the U.S. balance of payments was reduced.

Official policies definitely encouraged the improvement in the U.S. position. They were directed toward reducing the outflow of funds for investment in developed countries without dampening the flow of finance to the less-developed countries. In a special balance-of-payments message in February, President Johnson proposed the continuation and extension of the interest equalization tax to discourage private lending to foreigners, a vigorous export drive, reduction of the government's overseas spending, and voluntary programs to encourage commercial and financial companies to reduce their expenditures in developed countries.

Businesses were requested to abide by a 9-point voluntary program that involved no restrictions or taxes on ordinary business transactions with any country, and thus was in line with the U.S. policy of encouraging the expansion of world commerce. The program did not discourage investment in countries other than the wealthier countries of western Europe, as well as Japan, Australia, New Zealand, and Canada. (Special arrangements, however, were made for investing in Canada.)

The Interest Equalization Tax was extended to cover loans extending more than one year made by



Source: Statistical Abstract of the United States, 1965.

THE UNITED STATES cut its balance-of-payments deficit in 1965 as government policies encouraged the expansion of exports and discouraged private lending to foreigners. Businessmen were urged to delay investments overseas to curtail further the outflow of American gold.

U.S. banking offices to foreigners. This action closed an important loophole in the tax on foreign lending to developed countries. Furthermore, the financial community—including banks, insurance companies, and other financial institutions—was requested to limit the increase in its total loans to foreigners to 5% of the amount outstanding at the end of 1964. This request did not restrict normal expansion in loans to less-developed countries, and minimized to some extent restrictions on loans to Canada, Japan, and Britain. Total foreign lending had not only been running at a high level in 1963 and 1964, but had shown signs of increasing rapidly in early 1965. Within these general guidelines, loans to foreigners for the financing of U.S. exports were to be given preference over other requests for credit. The essence of the voluntary program was an attempt to achieve a fairly sharp restriction in lending by banks and other financial institutions to the more developed Western countries. In December a new request by the government to the financial community called for a 4 to 5% increase in its foreign lending during 1966.

Undoubtedly, domestic economic conditions in the United States tended in 1965, unlike several previous years, to make investment at home more attractive than investment abroad. Even though the capital outflow from the United States likely would have abated in any event, there was a widespread acceptance by business of the voluntary programs. Business consciously reduced foreign investment below the levels that would have prevailed in the absence of the government's request. This adherence, and rising exports and other receipts from abroad, produced a considerable improvement in the U.S. balance of payments, plus a marked return of confidence in the dollar, as indicated by the amount of gold losses. Almost $1 billion in gold was withdrawn from the United States in the first three months of 1965, but these losses became less than $0.5 billion in the second quarter, less than $0.25 billion in the third quarter, and insignificant in the last quarter.

Liquidity and Reserves. The so-called liquidity problem divides financial observers. Some doubt the long-run ability of the international monetary system to provide adequate financing for the prospective growth in international trade. Others fear that a more rapid growth in international reserves than that experienced in recent years would create dangerous inflationary pressures.

It is widely agreed that there is no urgent need to supplement the world's supply of international reserves, and that existing methods of creating international liquidity may suffice to meet the world's needs for some time. Nonetheless, it is also agreed that the world monetary system may need improvements in the future, well in advance of any possible shortage of international means of payment. Many problems of principle and technique would have to be considered.

Occasionally national differences in approach to changes in the international monetary system seem to reflect the differences in conditions among the various countries. The United States and Great Britain, troubled by balance-of-payments difficulties, appear to be concerned mostly about the long-run prospects for the stability of the international monetary system. Continental Europe, where prices have been rising more rapidly than in North America or Great Britain, gives greater weight to the inflationary dangers inherent in any undue expansion of international liquidity. The less-developed countries, dependent on the export of basic foods and raw materials—which, by the end of 1965, had been generally falling in price for more than a year—tend to support a more expansionary approach to questions of reforming the international monetary system.

In July, U.S. Secretary of the Treasury Henry Fowler suggested that the time might be nearing when an international conference should be held to discuss these questions. As yet, no definite plans have been made for such a meeting. However, the annual report of the International Monetary Fund, and also a special communiqué issued by the finance ministers and Central Bank governors of the ten major industrial countries, suggested in 1965 that it was now important to undertake a thorough examination of the functioning of the international monetary system and its probable future needs for liquidity. This examination was proceeding at the end of the year.

Britain's Balance of Payments. British authorities tackled their balance-of-payments problems by more general economic policies than those adopted by the United States. In late 1964 the British government raised taxes and trimmed its expenditures in order to hold back its citizens' willingness and ability to purchase goods, thereby reducing the demand for imports and making goods available for export. During 1965 further economies were made in government expenditure, and more restrictions were placed on private investment. Credit conditions were also kept tight to hold down demand.

In April, however, Britain took a step in the opposite direction by reducing to 10% the 15% special duties which had been imposed on many imports in October 1964. The balance-of-payments position improved during 1965, and confidence in sterling began to return, even though it was widely recognized that Britain's problems will continue to be serious for many years. The increase in confidence was evidenced by the improvement of sterling on the foreign exchange markets. At the beginning of the year the rate for the pound was close to the "floor" (£1 = U.S.$2.78) that the Bank of England announced it would maintain, but by the end of the year the pound was quoted well above par. (See table in MONEY.)

Italian and Japanese Positions. The Italian and Japanese exchange positions improved during the year, although at the cost of slower domestic progress in both countries. However, their foreign accounts apparently were under control, and they may resume the rapid rates of progress maintained up to 1964.

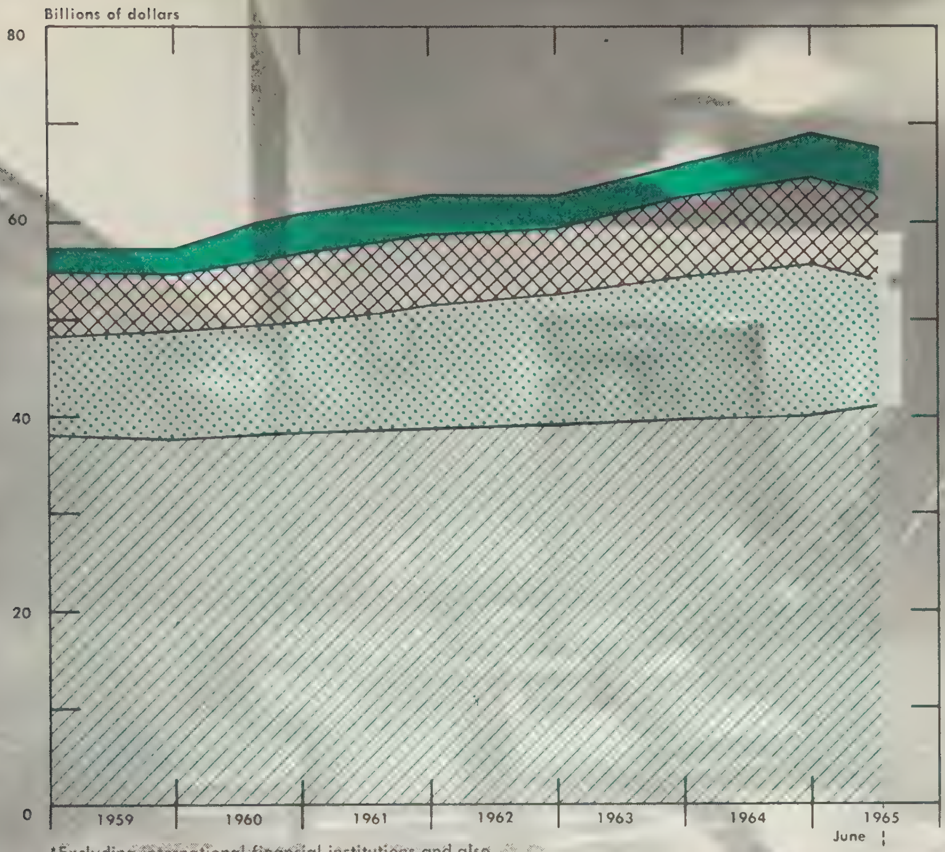
GRAEME S. DORRANCE
Chief, Financial Studies Division
International Monetary Fund

WORLD BANK

The International Bank for Reconstruction and Development, known informally as the World Bank, lent $1.02 billion to 27 countries and territories in the fiscal year ending June 30, 1965. The World Bank's 38 loans during the fiscal year financed road, railway, electric power, industrial, agricultural, educational, and water supply projects. In all, the bank has made 424 loans, aggregating $8.77 billion in 77 of its 102 member countries.

Organized in 1946, the World Bank is an international lending agency associated with the United Nations. It makes loans to member governments and, with the guarantee of the governments concerned, to their territories, public agencies, or private enter-

COMPOSITION OF WORLD MONETARY RESERVES*



*Excluding international financial institutions and also USSR, other eastern European countries, and Communist China.

🟩 **Reserve positions in IMF**

Amounts that can be drawn "essentially automatically" from the International Monetary Fund, corresponding to members' gold subscriptions, amounts of their currencies sold by the IMF to other members, plus outstanding lendings to the IMF.

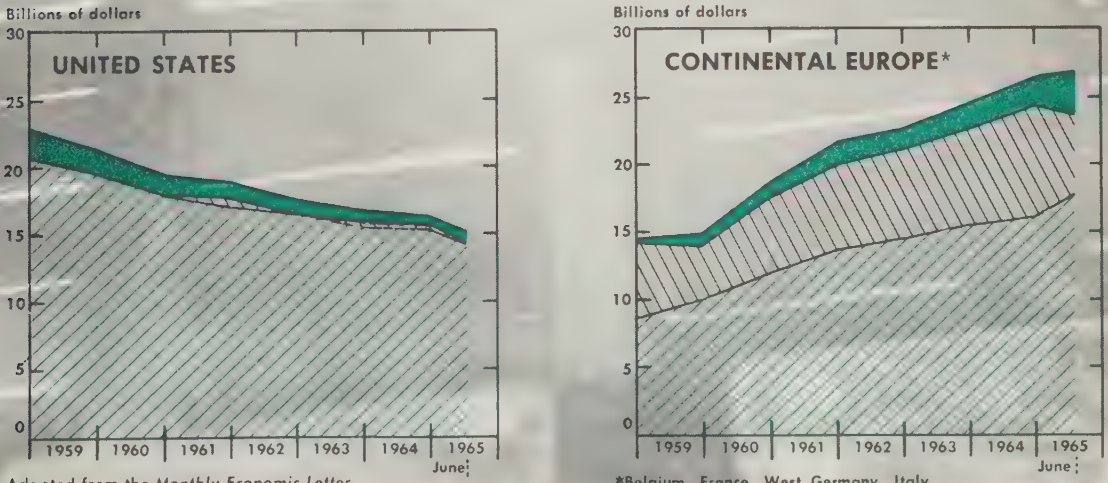
▧ Foreign exchange

▨ Gold

░ U.S. dollars

▩ Other (mainly sterling)

SHIFTS IN MONETARY RESERVES



Adapted from the *Monthly Economic Letter* of First National City Bank

*Belgium, France, West Germany, Italy, Netherlands, Sweden, and Switzerland.

prises. As of June 30, 1965, the total subscribed capital of the bank was $21.67 billion. Of this amount, however, only $2.17 billion had been paid in. The remainder was subject to call, and may be used only to meet the bank's obligations.

Operations. Transportation development loans, amounting to $411.7 million, made up the largest category of the bank's lending in fiscal year 1965. These loans financed road building in Finland, Gabon, Honduras, Iran, Jamaica, Japan, Mexico, Paraguay, and Venezuela, and railway projects in Nationalist China, Spain, and Yugoslavia. Loans totaling $321.4 million were made for electric power projects in Brazil, Chile, India, Japan, Nigeria, Portugal, Sierra Leone, Thailand, Venezuela, and Zambia and Rhodesia. A total of $179 million in industrial loans went to China, Finland, India, and Italy. Loans for agriculture, totaling $78.2 million, were made to Morocco, Peru, Thailand, and Uruguay. Two loans for water supply, totaling $27 million, were made to Malaysia and the Philippines, and a loan of $6 million financed an educational project in the Philippines.

Technical Assistance. During 1965 the World Bank assisted member countries in preparing development projects and high-priority programs. It also acted as executing agency for preinvestment studies financed by the United Nations Special Fund. New courses in economic management were offered by the bank's staff college, the Economic Development Institute, to senior officials from less-developed countries.

International Development Association (IDA). An affiliate of the World Bank, IDA came into existence in 1960 to provide funds for economic development on terms that are more flexible and bear less heavily on recipient countries' balance of payments than those of conventional loans. Most of its funds are derived by means of subscriptions and supplementary contributions from the wealthier nations. By Aug. 31, 1965, 95 countries had become members, and their initial subscriptions had amounted to $996 million. Usable funds from all sources totaled about $1.6 billion.

In fiscal year 1965, the IDA extended 20 development credits, totaling $309.1 million, to 11 countries. This brought IDA's total lending since its inception to $1.09 billion in 29 countries. Transportation was the principal category assisted by the IDA in fiscal year 1965. Credits for this purpose, amounting to $110.3 million, supported road development in Bechuanaland, Honduras, Kenya, Mauritania, Nigeria, and Somalia; railway improvement in India; and an inland water transport project in Pakistan. Agriculture was assisted in Kenya and Pakistan by credits totaling $88.3 million. Credits totaling $39 million were extended to Bolivia and Turkey for electric power development. A credit of $33 million assisted India's telecommunications system. Credits for educational projects in Afghanistan and Nigeria totaled $23.5 million. Industry in Turkey was assisted by a $15 million credit.

(Information for this article was supplied by the International Bank for Reconstruction and Development.)

INTERNATIONAL MONETARY FUND

The International Monetary Fund (IMF), a regulatory and lending agency with responsibility for international monetary stability, had 103 member countries on Sept. 30, 1965, with quotas (subscriptions) totaling $15.97 billion. In the preceding 12 months, Malawi and Zambia joined as new members, and Indonesia withdrew.

During the fiscal year ended April 30, 1965, 29 members drew (purchased) a total of almost $1.9 billion in 14 currencies, including for the first time Australian pounds and Mexican pesos. The total drawn was the second highest in IMF's history. Twenty-five countries repurchased nearly $517 million in 11 currencies, including for the first time Austrian schillings and Japanese yen. Twenty-three countries concluded stand-by arrangements to obtain nearly $2.16 billion when needed.

The IMF established initial par values for currencies with Burundi (87.5 Burundi francs equal U.S.$1), Sierra Leone (0.714286 leone = U.S.$1), and Trinidad and Tobago (TT$1.71429 = U.S.$1).

IMF TRANSACTIONS, YEAR ENDING APRIL 30, 1965

Country	Purchases	Repurchases	Stand-by arrangements
Afghanistan	$ 5,625,000	$ . . .	$ . . .
Argentina	. . .	50,000,000	. . .
Bolivia	. . .	2,750,000	12,000,000
Brazil	50,000,000	44,000,000	125,000,000
Burundi	2,000,000	. . .	4,000,000
Canada	. . .	107,153,445	. . .
Ceylon	8,000,000	3,750,000	. . .
Chile	22,000,000	13,000,000	36,000,000
Colombia	5,000,000	22,000,000	. . .
Costa Rica	5,000,000	2,065,873	10,000,000
Cyprus	1,950,000	. . .	. . .
Dominican Republic	20,000,000	. . .	25,000,000
Ecuador	3,000,000	6,578,000	13,000,000
Haiti	3,750,000	. . .	4,000,000
Honduras	2,500,000	2,500,000	7,500,000
India	125,000,000	100,000,000	200,000,000
Iran	17,500,000	. . .	. . .
Ireland	. . .	398,328	. . .
Israel	12,500,000	12,489,911	. . .
Italy	. . .	65,335,668	. . .
Jamaica	. . .	238,012	. . .
Jordan	. . .	295,295	. . .
Korea	. . .	. . .	9,300,000
Liberia	3,300,000	. . .	4,400,000
Malaysia	. . .	1,144,459	. . .
Mali	9,900,000	. . .	9,900,000
Morocco	13,125,000	. . .	. . .
Nicaragua	5,650,000	3,266	. . .
Pakistan	16,000,000	. . .	37,500,000
Panama	2,687,500	. . .	. . .
Paraguay	. . .	500,000	5,000,000
Peru	. . .	. . .	30,000,000
Philippines	. . .	11,250,000	40,400,000
Somalia	6,700,207	18,038	10,300,000
Sudan	7,500,000	. . .	. . .
Syrian Arab Republic	6,500,000	2,500,000	. . .
Tunisia	11,250,000	. . .	14,250,000
Turkey	16,000,000	16,000,000	21,500,000
United Arab Republic	40,000,000	18,000,000	40,000,000
United Kingdom	1,000,000,000	. . .	1,000,000,000
United States	475,000,000	. . .	500,000,000
Yugoslavia	. . .	35,000,000	. . .
Total	$1,897,437,707	$516,970,295	$2,159,050,000

On Feb. 26, 1965, the IMF executive directors proposed a general increase of 25% in quotas for all members, as well as special quota increases for 16 members. The governors later approved both proposals. Members may consent to the increases in their quotas at any time before March 25, 1966, and the increases will become effective when consent is obtained from members who held two thirds of the total quotas on the date the increases were proposed.

Further consideration was given in 1965 to the problem of international liquidity, and the annual report of the executive directors suggests ways in which progress can be made toward reinforcing the international monetary system. During 1966, close liaison will continue between the IMF and the Group of Ten industrial countries that have also been studying the problem.

FRANK A. SOUTHARD, JR.
Deputy Managing Director, IMF

INTERNATIONAL LAW

The United Nations continued its efforts to promote and extend the rule of international law in 1965, principally through two of its agencies—the International Court of Justice (World Court) and the International Law Commission.

International Court of Justice. The court, which is the principal judicial organ of the United Nations and meets in The Hague, Netherlands, held oral hearings of cases involving South West Africa, from March 15 to July 14, 1965, and from September 15 to November 15. Ethiopia and Liberia, which had brought the cases against the Union (now Republic) of South Africa in 1960, charged that South Africa had failed to fulfill the terms of its 1920 League of Nations mandate over the former German territory of South West Africa by practicing apartheid (separate development of racial groups) in the territory. South Africa has refused to transform its mandate into a trusteeship under the United Nations as other mandatory nations have done. The court's findings in the South West Africa cases were not expected until 1966 at the earliest. (See also SOUTH AFRICA.)

On April 19, Kenya accepted the compulsory jurisdiction of the court in international disputes outside the Commonwealth of Nations, to which Kenya belongs. Exempted from the court's jurisdiction were all disputes "concerning any question relating to or arising out of belligerent or military occupation or the discharge of any functions pursuant to any recommendation or decision of an organ of the United Nations," in accordance with which Kenya has accepted obligations. This reservation constitutes an innovation. Kenya's action brought to 40 the number of nations that have accepted the jurisdiction of the court as compulsory in international disputes.

The paucity of cases referred to the court for adjudication is a matter of serious concern. The only one waiting to be heard at the end of 1965 was the Barcelona Traction, Light, and Power Company case (*Belgium* v. *Spain*). UN Secretary General U Thant expressed the hope that states will "have more frequent recourse to the court as a means of settling their legal disputes." He declared: "The court has already established that it merits universal confidence, and if real progress is to be made in the peaceful settlement of disputes, I feel that the court should increasingly come to play the vital role envisioned for it in the [UN] Charter . . . ."

International Law Commission. Established in 1948 by the UN General Assembly, the commission held its 17th session from May 3 to July 9, 1965. It undertakes studies and prepares draft codes, articles, and declarations for submission to the General Assembly.

At its 1965 session, the commission completed the second reading of part 1 of its draft articles on the three-part law of treaties. Part 1, concerning the conclusion, entry into force, and registration of treaties, had been revised in the light of written comments submitted by 23 governments. The commission decided to limit the scope of the draft to treaties concluded between states, and to exclude agreements made by (1) international organizations, (2) the Holy See, and (3) other international entities, such as insurgent groups, which in some circumstances may enter into treaties. The draft articles of all three parts will serve as the basis of a single multilateral convention.

The commission also decided to hold a special session in January 1966 in order to complete its work on the law of treaties before the present members' terms of office expire. The 15 members serve for three years in individual capacities.

In 1965 the commission adopted 44 articles of its draft on special missions and decided to communicate it to national governments for their comments. The term special missions or *ad hoc* diplomacy refers to that type of diplomatic relations between states that is constituted by itinerant envoys, diplomatic conferences, and special missions sent to a state for limited purposes. In preparing the draft articles, the commission sought to codify the modern rules of international law on the subject and therefore to include rules that had not yet been generally accepted. It hopes to complete this work in 1966.

The commission also requested governments to submit their views and suggestions as to whether special rules of law should be drafted on the status of high-level special missions.

Teaching of International Law. As early as 1947 the UN General Assembly requested governments to take appropriate steps to extend the teaching of international law in universities and institutions. In 1963 the assembly adopted three resolutions on the subject and established the Special Committee on Technical Assistance to Promote the Teaching, Study, Dissemination, and Wider Appreciation of International Law. This committee drew up a practical plan and proposals, which were adopted by the General Assembly on Dec. 20, 1965, during its 20th session.

The International Law Commission, inspired by the 1963 resolution, recommended that its publications be more widely disseminated among law school libraries and other interested libraries and institutions, and that seminars on international law for advanced students and young government officials be organized in conjunction with the commission's own sessions.

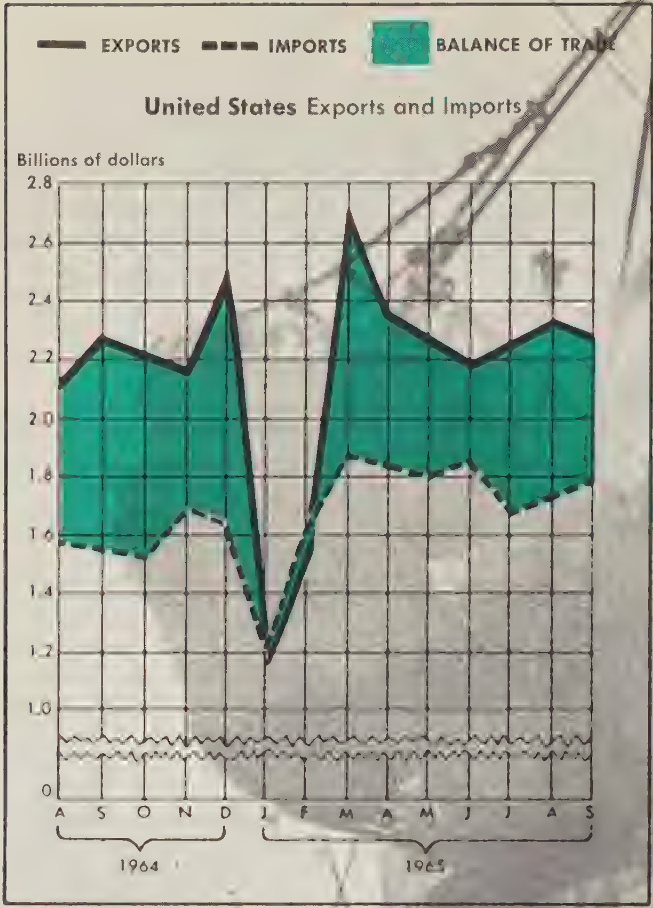
UN Conference on Transit Trade of Landlocked Countries. A conference attended by 58 governments concerned with the problem of transit trade of landlocked countries was held at UN Headquarters, New York City, from June 7 to July 8, 1965. There are 23 landlocked members of the United Nations, and this conference was the first of its type ever held. The conference adopted a convention which will enter into force when ratified by two landlocked countries and two transit states having a seacoast.

Treaty Developments. During the period June 16, 1964, to June 15, 1965, 27 volumes were published in the UN Treaty Series. (Another 13 volumes, up to vol. 489, appeared by the end of 1965.) During the same 12-month period ending in June, 725 treaties and international agreements were registered with the UN Secretariat. This brought to 11,511 the number of treaties and agreements registered or filed and recorded from Dec. 14, 1946, to June 15, 1965.

LEO GROSS
Professor of International Law
The Fletcher School of Law and Diplomacy
Tufts University

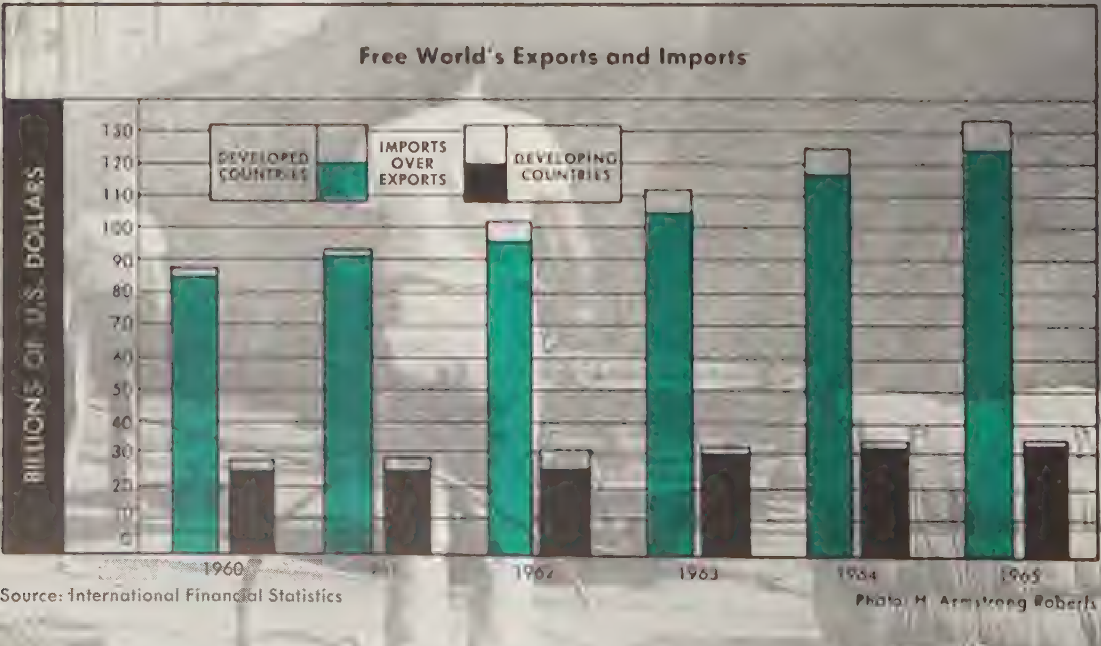
INTERNATIONAL MONETARY FUND. See INTERNATIONAL FINANCE.

INTERNATIONAL RELATIONS. See AFRICA; ASIA; EUROPE; FOREIGN POLICY, U.S.; LATIN AMERICA; UNITED NATIONS.



New York TIMES

International Trade



Source: International Financial Statistics

Photo: H. Armstrong Roberts

INTERNATIONAL TRADE

World economic developments in 1965 resulted in a slowing in the rate of advance of free-world trade. Regional economic groups continued to make progress toward their respective goals. Negotiations under the General Agreement on Tariffs and Trade, however, made little headway.

TRADE DEVELOPMENTS

Through the first half of 1965, free-world exports were valued at an annual rate (projected total for the year) of $159 billion, about 7% above the comparable 1964 level. Exports had expanded in 1964 by 12% over the previous year, and in 1963 by 9% over 1962. In 1965, shipments from the industrial countries increased more than twice as fast as those from the developing countries, but exports from both groups were far less buoyant than they were in 1964.

World Exports. The smaller growth rate for the developing countries' foreign sales was caused by a slowing in the expansion of demand for some of the foods and crude materials produced in those nations. In addition, prices for certain foodstuffs—notably sugar, coffee, and cocoa beans—were well below those in 1964. These declines were balanced to some extent by an increase in prices of ores and metals, major quantities of which come from the developing countries.

FREE-WORLD TRADE, BY REGIONS, 1964–65
(Billions of dollars; quarterly figures expressed as annual rates)

Area	1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter
	1964				1965	
Total exports, f.o.b.	145.1	151.1	145.2	163.5	152.2	165.4
U.S. and Canada	32.7	34.9	33.7	37.4	30.6	38.0
Latin America	11.6	11.6	11.0	11.8	11.3	...[1]
Western Europe	68.1	71.0	67.4	78.4	75.1	78.2
Africa	8.3	8.1	7.9	8.2	8.3	...[1]
Asia	19.8	20.9	21.4	23.3	22.8	...[1]
Australia, New Zealand	4.4	4.4	3.5	4.0	4.1	4.2
Unclassified	0.2	0.2	0.3	0.4	...	...[1]
Total imports, c.i.f.	151.9	160.3	154.3	167.6	160.6	175.0
U.S. and Canada	25.6	28.2	27.6	29.8	27.4	32.8
Latin America	9.4	10.8	11.1	11.9	9.8	...[1]
Western Europe	80.9	84.1	78.7	86.7	85.4	90.3
Africa	8.5	8.6	8.8	9.4	9.2	...[1]
Asia	23.2	23.9	23.3	24.8	23.9	...[1]
Australia, New Zealand	3.9	4.1	4.5	4.6	4.5	4.9
Unclassified	0.4	0.6	0.3	0.4	0.4	...[1]

[1] Not available.

Exports from the industrial countries through June 1965, though 9% above those in the first half of 1964, were not nearly so expansive as in the preceding year. Demand for foreign products in some of the major trading countries, such as the United States, Canada, and West Germany, continued strong, but in other countries—Britain, France, Italy, and Japan—there was little or no expansion over 1964. Sluggish import requirements for manufactured goods in the latter countries tended to hold down the average rate of increase in shipments from the industrial nations.

U.S. Imports. As a result of a booming domestic economy, U.S. imports increased with unusual sharpness in 1965. In the first 10 months they reached an annual rate of $20.8 billion, nearly 14% above the January–October annual rate for 1964. The annual rate of exports, responding to a steady but not rising demand from Europe and the developing countries, increased only 3.5% in the same period. Thus, the U.S. trade surplus, which had climbed to a record $6.9 billion in 1964, was expected to drop to $5.2 billion. The latter figure, though representing a significant decline from the 1964 surplus, nevertheless exceeded the average favorable balance in the years 1960–63.

Imports through September 1965 (the latest detailed data available) registered sizable increases in all categories except food. Sharply reduced quantities of coffee, sugar, and beef were only partly balanced by increased arrivals of fish and animals for food.

Expanding American production, along with exceptional demands for steel because of a threatened steelworkers' strike until the end of August, produced large advances in imports of both industrial supplies and capital equipment. Purchases of foreign machinery were up by a third, an unusual expansion in a single year. Significant increases occurred in imports of many types of machinery (including agricultural, textile, and power-generating), and in engines and electrical apparatus. Imports of industrial supplies, representing about half of U.S. imports, rose by almost $1 billion through September. Over one third of that amount stemmed from increased iron and steel mill products. Other foreign supplies purchased in significantly greater volume than in 1964 included nonferrous ores and metals (especially tin, nickel, and aluminum), wool, iron ore, pulp, newsprint, and petroleum.

As a result of a sharp rise in consumer expenditures and aggressive selling by foreign producers, imports for direct consumer use expanded considerably. Among the products finding wider U.S. markets were clothing, footwear, artworks, toys, musical instruments, television sets, and automobiles.

All areas of the world, except Africa, provided more goods to the United States in 1965, but by far the major part of the rise stemmed from western Europe, Japan, and Canada. In fact, more than half of the increase in U.S. imports through September came from the latter two countries. Japan provided much more iron and steel, as well as various kinds of electrical equipment, textiles, and other consumer goods. From Canada, the major foreign source of U.S. industrial raw materials, came more newsprint, lumber, nickel, and other nonferrous metals, as well as larger amounts of fish, motor cars, and agricultural machinery.

The developing countries earned only about $175 million more from exports to the United States in the first nine months of 1965 than in the same period of 1964. Much of that was shipped from eastern and southern Asia, especially Hong Kong and India.

U.S. Exports. The value of exports of manufactured goods from the United States in the first three quarters of 1965 rose by 5% over the comparable period of the previous year, but agricultural shipments declined 3%. Wheat exports, cut by the absence of unusual sales to the USSR and outpriced in world markets in the early months of 1965, were off nearly a quarter in value. Shipments of cotton, some of which was also offered at noncompetitive prices, declined by almost one third. Expanded exports of coarse grains, fats, soybeans, and animal feed did not entirely compensate for reduced shipments of other agricultural products.

Nonelectrical machinery and aircraft led the rise among the manufactured exports. Increased shipments of tractors, mechanical handling equipment, office machines, and power machinery were offset in part by declining sales, compared with 1964, of metalworking machinery, construction equipment, and telecommunications apparatus. Increased exports of both military and civilian planes contributed to the 25% rise in the value of aircraft sales. Greater shipments of copper, in strong world demand, added to the export rise. However, exports of steel products fell as a result of greater domestic needs, the building up of stocks in anticipation of a strike, and lowered shipments by the U.S. Agency for International Development.

Canada was the only buoyant market for U.S. exports. Sales to that country were expected to be 13% over 1964, while those to western Europe remained steady, and shipments to Latin America were expected to drop by about 3%.

CHIEF U.S. EXPORTS AND IMPORTS
(Thousands of dollars)

Commodity	Jan.–Sept., 1964	Jan.–Sept., 1965
Total exports	$19,272,000	$19,793,000
Wheat	1,036,000	792,000
Coarse grains	602,000	783,000
Other food	1,332,000	1,282,000
Soybeans	342,000	379,000
Cotton	496,000	346,000
Oils and fats	292,000	373,000
Other crude materials	1,257,000	1,276,000
Fuels	707,000	698,000
Chemical elements and compounds	667,000	709,000
Other chemicals	1,074,000	1,046,000
Power-generating machinery	493,000	499,000
Agricultural machinery	629,000	660,000
Office machines	314,000	333,000
Other nonelectrical machinery	2,142,000	2,266,000
Power machinery	234,000	352,000
Other electrical machinery	970,000	868,000
New motor vehicles	544,000	523,000
Automotive parts and accessories	647,000	704,000
Aircraft	653,000	843,000
Iron and steel-mill products	472,000	437,000
Nonferrous metals	345,000	411,000
Metal manufactures	395,000	403,000
Textiles other than clothing	420,000	386,000
Scientific and photographic instruments	276,000	345,000
All other domestic exports	2,669,000	2,832,000
Reexports	264,000	247,000
Total imports	$13,645,000	$15,251,000
Meat	314,000	300,000
Fish	305,000	348,000
Fruits, nuts, and vegetables	307,000	352,000
Coffee	850,000	692,000
Sugar	332,000	264,000
Other food	410,000	436,000
Beverages and tobacco	342,000	376,000
Textile fibers and wastes	311,000	329,000
Iron ore	304,000	332,000
Other crude materials	1,482,000	1,570,000
Petroleum and products	1,435,000	1,551,000
Chemicals	530,000	558,000
Nonelectrical machinery	629,000	824,000
Electrical apparatus	309,000	429,000
New automobiles	409,000	433,000
Newsprint	544,000	576,000
Iron and steel-mill products	513,000	864,000
Nonferrous metals	721,000	832,000
Clothing	327,000	391,000
Other textiles	504,000	584,000
All other imports	2,767,000	3,210,000

U.S. Balance of Payments. Through the third quarter of 1965, the surplus on trade made a smaller contribution to the U.S. balance of international payments than it had in 1964. Nevertheless, the balance of payments account showed a substantial improvement over recent years, as the deficit through September was at an annual rate of only $1.25 billion, compared with deficits of $2.8 billion in 1964 and $2.7 billion in 1963.

The improvement in 1965 stemmed in large part from implementation of the voluntary program, initiated February 10, whereby banks and business corporations cooperated with the U.S. government in an effort to improve the balance of payments. Net capital outflows reported by U.S. banks declined from nearly $2.5 billion in 1964 to only $130 million, on a seasonally adjusted basis, through the first nine months of 1965. At the end of September the amount of outstanding bank assets covered by the Federal Reserve System's guidelines under the voluntary program was about $470 million below the suggested limit, or at the same level as on Jan. 1, 1965.

This exceptionally favorable position was tempered somewhat by certain unfavorable developments. One unfavorable factor was the sharp increase in the first nine months of 1965 in net foreign sales of U.S. corporate securities. The sales were partly conversions by the British government of securities requisitioned from British residents at the beginning of World War II. A rise in purchases of new issues of foreign securities was another detrimental factor in the U.S. balance of payments position.

Data on capital movements by nonfinancial concerns, available only through June, showed an improvement of almost $1 billion—from a net outflow to a large net inflow—as these corporations repatriated foreign assets. New direct investments through June, however, were valued at $2.0 billion, far above the figure for either half of 1964. It was considered too soon for that figure to reflect fully the changes in corporate policy which may have been initiated in response to the new voluntary program to improve the balance of payments.

Canada. The Canadian trade surplus of $50 million at the end of the first eight months of 1965 was only one tenth as large as the surplus a year earlier. Exports rose by less than 2%, while imports increased by 11.5%.

Sales to the United States and to Commonwealth countries other than Britain expanded strongly, but those to the rest of the world decreased by 19%. A sharp drop in sales of wheat to eastern Europe, particularly to the USSR, accounted for much of the decline. The Canadian government, however, announced in August a large new contract for the sale of wheat to the Soviet Union, and another, to Communist China, in October. Delivery of some of this wheat before the winter freeze-up was expected to cause exports to expand in the latter part of the year. Unlike wheat, total shipments of which were far below 1964 levels through August 1965, sales of newsprint, woodpulp, iron ore, and aluminum rose significantly, especially in response to strong demand from the United States.

As the Canadian economy continued its fifth consecutive year of expansion, this growth was reflected in a large increase in demand for imported products, both for industry and consumer use. The extensive rise in private and public investment stimulated foreign purchases of steel mill products and nonferrous metals, while increasing consumer incomes were the cause of greater imports of motor vehicle parts for assembly as well as of assembled passenger cars. Purchases of aircraft were also much higher than in 1964.

Imports through May from the United States went up 10%, following a 16% rise in 1964 over the previous year. Larger purchases were also made in Japan and in several European countries. In the first five months, the only major trading partners supplying less to the Canadian market were Venezuela and Britain; from both countries the decreases were minor.

A new development, likely to have a significant effect on Canadian-U.S. trade in the years to come, was the establishment of duty-free trade in automotive products between the two countries A joint agreement, signed on Jan. 16, 1965, was implemented in Canada at once by an order in council and in the United States by the Automotive Products Trade Act of 1965, signed into law by President Johnson on October 21. The agreement represented a step toward a unified North American automotive industry, and was expected to lead to expanded trade in both directions across the border.

Almost entirely as a result of unfavorable trade movements, Canada's balance of international payments on current account showed an enlarged deficit in the first half of 1965. From $491 million in January-June 1964, the current account deficit rose to $757 million in January-June 1965. An increase of only 2% occurred in the net payments for nonmerchandise trade items. There were nearly offsetting effects from changes in individual items, with larger net payments for travel, official contributions, and interest contributing to the increased outflow.

Net capital inflows through June showed a rise of about $160 million, largely because of an increase in long-term forms.

Latin America. Although Latin American trade was in a depressed condition at the beginning of the year, it picked up in the second quarter and promised to rise above 1964 levels for the full year. The rate of expansion, however, was expected to be lower than the 8% increase in the previous year, which had brought both exports and imports to peak levels.

As aid and foreign investments in this area continued to expand, it became increasingly necessary for many of the Latin American countries to increase exports in order to meet their payments for debt servicing and investment income. The expansion of exports was difficult to achieve because the countries remained dependent on a few products for which world demand and prices were not growing strongly. In the first half of the 1960's, for example, exports from Latin America increased by an average 5.2% per year, compared with a gain of 6.2% for all other developing countries and an annual world export expansion of 8.5%.

Imports into Latin America are largely essential machinery and equipment for development, and cannot be reduced without affecting growth rates. For a while, various countries attempted to develop "import-substitution" industries in order to reduce the costs of imports. Frequently, however, these new domestic industries provided much costlier goods than those imported, and efforts in this direction have now been deemphasized. Because of the limited growth of imports by Venezuela and Brazil, the value of goods arriving in Latin America from abroad expanded an average of 3.3% a year in the period 1959–65. This rate was even slower than the rate for exports.

Regional economic integration continued to proceed slowly in Latin America. The decision of Venezuela late in October to join the Latin American Free Trade Association was considered a hopeful sign for the expansion of that organization. Venezuela's economy is among the strongest in the region. The country has extensive reserves and consistently large surpluses in trade and balance of payments.

After continuing to run a large trade deficit in 1964, Mexico showed every prospect of doing so again in 1965. Capital goods, which make up the bulk of Mexico's imports, expanded further in 1965 to support economic development in that country. Foreign exchange reserves dropped by mid-1965 to their lowest point since Sept. 30, 1963.

Brazil, which experienced an export surplus in 1964 for the first time in 10 years, attained a further improvement in its trade balance in the first half of 1965. An adjustment to a more realistic rate of foreign exchange and a good agricultural harvest were expected to lead to additional increases in export earnings, while imports were aided by new foreign aid and loans.

Europe. Exports from the 18 European countries of the Organization for Economic Cooperation and Development (OECD) continued their strong uptrend of recent years, rising in the first half of 1965 by 11%. The import expansion, which had averaged more than 10% in each of the two previous years, slowed somewhat. Through June, arrivals of foreign goods into OECD countries (including imports from each other) were about 7% higher than in January–June 1964.

All major areas of the world purchased more from the OECD countries in 1965. The largest value increase over 1964 related to their trade with each other, which accounts for more than 60% of the total. Demand was relatively stronger, though, from the Sino-Soviet bloc, Oceania, and North America.

Imports into the OECD countries were significantly larger from Africa and North America, as well as from each other. West Germany provided the fastest growing market for imports in 1965. In fact, in the third quarter, purchases from other

U.S. TRADING PARTNERS, 1964–65

Country	Exports and reexports[1]		General imports	
	1964	Jan.–Sept., 1965	1964	Jan.–Sept., 1965
Total	$26,442,000,000	$19,793,000,000	$18,685,000,000	$15,251,000,000
Argentina	262,000,000	195,000,000	111,000,000	90,000,000
Australia	626,000,000	541,000,000	280,000,000	218,000,000
Belgium-Luxembourg	628,000,000	454,000,000	420,000,000	359,000,000
Brazil	387,000,000	201,000,000	535,000,000	322,000,000
Canada	4,747,000,000	4,002,000,000	4,241,000,000	3,499,000,000
Chile	180,000,000	165,000,000	218,000,000	150,000,000
Colombia	246,000,000	137,000,000	280,000,000	188,000,000
France	802,000,000	649,000,000	495,000,000	447,000,000
Germany, West	1,310,000,000	1,063,000,000	1,171,000,000	948,000,000
Great Britain	1,468,000,000	1,101,000,000	1,141,000,000	956,000,000
Hong Kong	188,000,000	142,000,000	250,000,000	244,000,000
India	955,000,000	738,000,000	304,000,000	260,000,000
Italy	833,000,000	613,000,000	526,000,000	435,000,000
Japan	1,908,000,000	1,488,000,000	1,769,000,000	1,733,000,000
Mexico	1,076,000,000	809,000,000	643,000,000	461,000,000
Netherlands	990,000,000	748,000,000	217,000,000	180,000,000
Netherlands Antilles	85,000,000	56,000,000	291,000,000	240,000,000
Philippines	360,000,000	253,000,000	387,000,000	270,000,000
South Africa	393,000,000	354,000,000	249,000,000	157,000,000
Spain	315,000,000	326,000,000	114,000,000	98,000,000
Sweden	300,000,000	239,000,000	203,000,000	166,000,000
Switzerland	341,000,000	255,000,000	255,000,000	207,000,000
Venezuela	600,000,000	454,000,000	956,000,000	753,000,000
Other countries	5,400,000,000	3,988,000,000	3,629,000,000	2,870,000,000
Special category	2,042,000,000	822,000,000	...	...

[1] Country data exclude "special category" exports on which information is withheld for security reasons. Export data by country for 1965 are not comparable with those for 1964. A major declassification of over $1 billion of "special category" exports was initiated, beginning January 1965, on products for which country of destination information was formerly withheld.

countries were so large that West Germany ran a trade deficit, on a gross basis, for the first time in many years. The balance of payments on current account for the first nine months registered a deficit of almost 5.6 billion Deutsche marks (DM), compared with a surplus of DM0.9 billion in the comparable period of 1964. The deficit was caused by deteriorations in both the service and trade accounts. The service account showed larger deficits from investment income payments and tourism, and the trade account deteriorated because imports accelerated faster than exports.

Britain, whose imports ranked second to West Germany's among the European countries for the first time in 1965, recorded only a slight rise in foreign purchases in the first nine months of the year, compared with the monthly rate for 1964. Although the 15% surcharge levied on all imports except food and raw materials in October 1964 was reduced to 10% toward the end of April 1965, imports were still held in check. Exports, on the other hand, expanded by 5.5% in January–September over the 1964 monthly average. The United States proved an exceptionally expansive market for British goods in 1965, and sales to the sterling area and the European Free Trade Association countries were also strong.

The British balance of payments in the second quarter of 1965 showed a surplus for the first time since the second quarter of 1963. For January–June 1965, payments remained in substantial deficit, although there was a marked improvement over July–December 1964. The combined current and long-term capital account deficit, after seasonal adjustment, dropped from £760 million in July–December 1964 to £330 million in January–June 1965, at annual rates.

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TARIFFS

The major world developments in the field of tariffs during 1965 were the adoption by various countries of either new tariff classifications and/or new rates of duty, actions by the contracting parties to the General Agreement on Tariffs and Trade (GATT), and continued progress by regional economic groups.

New Tariff Schedules. At the close of 1965, the tariff classifications of about 80 countries, including those of most members of the major regional economic groups, were based on the Brussels Tariff Nomenclature (BTN). Mexico, Australia, Nigeria, Gambia, and South Africa recently had adopted such classifications; approximately 15 other countries were contemplating doing so. The United States was one of the few remaining major trading nations whose tariff schedule was not constructed on the basis of the BTN.

Primarily in an effort to alleviate balance-of-payments difficulties, several countries imposed import duty surcharges. In October 1964, Britain had levied a surcharge of 15% on most imports except food and basic raw materials; in April 1965 the surcharge was reduced to 10%. India, Paraguay, and Jordan also increased their rates of duty during the year. Other countries, notably Pakistan, Israel, Iceland, and Turkey, liberalized their import restrictions.

U.S. Rates. The most important U.S. tariff changes in 1965 occurred under an agreement between the United States and Canada. Signed on January 16, it removed the duties on shipments between the two countries of automobiles and automobile parts for assembly. The agreement and accompanying arrangements were expected to stimulate increased manufacturing in Canada, and eventually to provide substantial savings to consumers in that country, where the duties on automotive products were relatively high.

GATT. By the end of 1965, 66 countries were members and 6 were provisional members of the General Agreement on Tariffs and Trade—a multilateral agreement governing rules of conduct in international trade and establishing schedules of tariff concessions by the respective contracting parties. The problems of the developing countries continued to hold high priority at the 22nd plenary session of GATT contracting parties held in Geneva, Switzerland, March 2–25, 1965.

In October, the contracting parties undertook a major review of the Long-Term Arrangement Regarding International Trade in Cotton Textiles. The arrangement, which had been negotiated under the auspices of GATT and had been operating for three years, is designed to prevent market disruption and to promote the orderly development of international trade in cotton textiles, particularly as it affects developing countries. Under the arrangement, which is to remain in force until October 1967, the United States by October 1965 had concluded agreements with 19 countries governing their exports of cotton textiles to the United States.

It was hoped that the sixth round of GATT negotiations—the so-called Kennedy round, which opened in Geneva on May 4, 1964, and continued throughout 1965—would achieve results more comprehensive than those attained in any of the five earlier rounds. Whereas past negotiations had dealt with tariff barriers almost exclusively on an item-by-item basis, the Kennedy round aimed at substantial linear (across-the-board) reductions. By the close of 1965, however, few of the issues that were at stake had been resolved.

As a step toward negotiations in the industrial field, the principal participating countries had submitted in November 1964 "exceptions" lists identifying the industrial items which were to be wholly or partly excepted from the linear tariff reduction. During the first part of 1965, the participants agreed to submit offers on all agricultural products by September 16, but members of the European Economic Community were prevented from doing so by France's delay in participating.

Regional Arrangements. In recent years many countries have formed regional economic arrangements while continuing to adhere to their commitments in the GATT. Some of these arrangements have objectives that are much broader than the achievement of a common tariff policy. They all aim to eliminate or reduce trade restrictions between member countries, and some of them seek to establish a common external tariff.

European Economic Community (EEC). On Jan. 1, 1965, the member states of the EEC—Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany—reduced by another 10% the duties applicable to commodities originating within the community. As a result, duties on industrial imports originating within the community became generally dutiable at rates equal to only 30% of those existing on Jan. 1, 1957. Duties on most agricultural products traded within the community were reduced to either 45% or 50% of those existing on the same date. The 1965 reduction, like most of the earlier reductions, was ahead of schedule; hence, it was hoped that tariffs on intracommunity trade in manufactured goods would be eliminated at least by 1967. On July 1, 1965, however, further progress was interrupted when France announced that it would not participate in the community's forthcoming activities.

During 1965, the member states of the EEC made no further alignment of their national tariffs with the EEC's projected common external tariff. Two of three stages toward such alignment had been completed previously, reducing the difference between the 1957 rates of the individual members and the rates of the common external tariff by 60%, with certain exceptions.

European Free Trade Association (EFTA). The EFTA, like the EEC, hoped to achieve duty-free trade in industrial goods among themselves by Jan. 1, 1967. Therefore, the association members—Austria, Britain, Denmark, Norway, Portugal, Sweden, and Switzerland—reduced the rates of duty on intra-EFTA trade in industrial commodities by another 10% on Dec. 31, 1964. The resulting rates were generally equal to 30% of those existing in 1960, when the EFTA was formed. An additional 10% reduction was effected on Dec. 31, 1965. Finland, which had become an associate member in 1961, enjoys the rights of a full member of the association, although it is still behind the others in scheduled tariff reductions.

Unlike EEC members, EFTA members have not been required to reduce duties on agricultural commodities traded among them (although efforts have been made to stimulate intraregional trade in these products.) Nor have they undertaken to create a common tariff on imports from countries outside the association. (See Europe.)

Latin American Free Trade Association (LAFTA). At their fourth annual session in late 1964, the members of the LAFTA—Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay—agreed to various concessions, effective Jan. 1, 1965. These concessions brought the number granted since LAFTA's inception in 1961 to approximately 8,600. The members approved the first "common schedule," identifying articles for which all trade barriers between members were to be eliminated by 1973. Once an item had been placed on the common schedule, member countries could not, without authorization, withdraw or alter the concession thus accorded. The fifth annual round of LAFTA negotiations was in progress late in 1965.

Members of the LAFTA, like those of the EFTA, continued to apply their individual tariffs to imports from nonmember countries; the fourth LAFTA session, however, did adopt a resolution calling for the ultimate establishment of a common external tariff.

Central American Free Trade Area (CAFTA). By 1965 the CAFTA—composed of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua—had essentially realized its aim of duty-free trade among members. Progress also was made during the year toward the creation of a common tariff applicable to commodities imported from nonmember countries. This common external tariff was expected to be completed around 1970. (See Latin America.)

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INVESTMENTS, Foreign. See Foreign Investments.

IOWA

The 1965 session of the Iowa General Assembly was the most controversial in a decade. Democrats controlled both houses for the first time in 30 years, and 100 of the 183 members of the Assembly were sitting in the legislature for the first time. In addition to having the youngest membership, the 61st General Assembly session was the most expensive and the longest regular session in the history of the state.

Legislation. The Assembly, which convened on January 11 and adjourned on June 4, adopted a budget of $267 million, nearly $12.4 million higher than that recommended by Democratic Gov. Harold Hughes. A total of 480 bills were passed and only three were vetoed by the governor. One constitutional amendment was approved for the second time, as required by the state's amendment procedure. The amendment, to be voted on by the people in the November 1966 elections, allows laws to go into effect on July 1 of the year in which they are passed, rather than on July 4.

Eight constitutional amendments were approved for the first time by the 1965 session. The amendments would accomplish the following: (1) give the legislature authority to fix expense allowances as well as salaries for members of succeeding legislatures; (2) provide for annual sessions of the legislature; (3) legalize bingo; (4) give the governor

IOWA · Information Highlights

Area: 56,290 square miles.
Population: 2,783,000 (1965 est.).
Chief Cities (1965 est.): Des Moines, the capital (216,000); Cedar Rapids (103,000); Davenport (94,500); Sioux City (91,000); Waterloo (74,000); Dubuque (59,500); Council Bluffs (58,500); Iowa City (38,500).
Government: *Chief Officers*—governor, Harold E. Hughes (Democrat); lt. gov., Robert D. Fulton (D); secy. of state, Gary L. Cameron (D); atty. gen., Lawrence F. Scalise (D); treas., Paul Franzenburg (D); supt. of pub. instr., Paul F. Johnston; chief justice, Theodore G. Garfield. *Legislature*—Iowa General Assembly (convened Jan. 11, 1965); Senate, 59 members (34 Democrats, 25 Republicans); House of Representatives, 124 members (101 D, 23 R).
Education: *School enrollment* (1964–65)—public elementary, 464,000 pupils (14,904 teachers); public secondary, 168,000 pupils (12,629 teachers); nonpublic schools, 111,100 pupils (3,710 teachers); college and unversity (fall 1964), 75,398 students. *Public school expenditures* (1964–65)—$266,600,000 ($465 per pupil); average teacher's salary, $5,747.
Public Finance (fiscal year, 1964): *Revenues*, $613,005,000 (sales tax, $88,215,000; motor fuel tax, $63,092,000; federal funds, $129,511,000). *Expenditures*, $586,264,000 (education, $159,599,000; health, welfare, and safety, $70,252,000; highways, $181,150,000). *State debt*, $25,650,000 (1964).
Personal Income (1964): $6,548,000,000; average annual income per person, $2,376.
Public Assistance (fiscal year 1965): $55,350,628 to 75,322 recipients (aged, $30,196,200; dependent children, $19,531,000).
Labor Force (employed persons, July 1965): *Agricultural*, 294,500; *nonagricultural* (wage and salary earners), 747,800 (25% manufacturing, 24% trade, 18% government). *Unemployed persons* (July 1965)— 20,000.
Manufacturing (1963): Value added by manufacture, $2,275,928,000 (transportation equipment, $25,727,000; primary metals, $106,092,000; nonelectrical machinery, $476,344,000; electrical machinery, $256,121,000; fabricated metals, $103,121,000; food and products, $653,063,000).
Agriculture (1964): *Cash farm income*, $2,912,036,000 (livestock, $1,994,617,000; crops, $691,141,000; govt. payments, $226,278,000). *Chief crops* (tons)—corn for grain, 21,137,000 (ranks 1st among the states); hay, 8,124,000 (rank, 2nd); oats, 1,882,000 (rank, 2nd); grapes, 450,000 (rank, 14th); wheat, 78,000; sorghum grain, 41,000; barley, 6,600.
Mining (1964): *Production value*, $106,630,000 (rank, 29th). *Chief minerals* (tons)—gypsum, 1,287,000 (rank, 3rd); stone, 23,935,000; sand and gravel, 13,890,000; clays, 1,008,000; bituminous coal, 973,000.
Fisheries (1963): *Commercial catch*, 2,438,000 pounds ($173,000).
Transportation: *Roads* (1965), 112,104 miles (102,451 surfaced); *motor vehicles* (1965), 1,573,839; *railroads* (1964), 8,637 miles; *airlines* (1965), 4 (224 airports).
Communications (1965): *Telephones*, 1,283,000; *television stations*, 13; *radio stations*, 87; *newspapers*, 48 (daily circulation, 960,922).

power to veto separate items on appropriations measures; (5) give the governor authority to appoint the secretary of state, state treasurer, and attorney general, and give the legislature authority to appoint the state auditor; (6) provide home rule for municipalities; (7) extend the term of the governor and lieutenant governor from two to four years; and (8) provide a new legislative apportionment plan calling for a Senate of not more than 50 members, and a House of not more than 100—both apportioned on a strict population basis.

The temporary legislative apportionment plan adopted in 1964 was challenged in the courts in 1965. Senate apportionment was declared unconstitutional by a three-man panel of federal judges in February. Apportionment of both houses was under review by the Iowa Supreme Court at the end of the year.

Important laws enacted during the year changed the time of the primary elections from June to September, abolished capital punishment, and permitted counties to create an office of public defender. The Assembly also increased the salaries of almost all elected officials. Salaries of legislators were raised from $30 to $40 per day, and the governor's salary was increased to $25,000 per year.

Floods. During April the Mississippi and its tributaries reached record high-water levels, forcing thousands from their homes along the eastern border of the state. The flood crested at Dubuque on April 26, and in Davenport the following week.

Keokuk Tragedy. An explosion in the Keokuk National Guard Armory on November 24 caused 20 deaths and injured 30 persons. A natural gas leak was blamed for the explosion and fire which occurred during a square dance in the armory.

Agriculture. In 1965, Iowa lost its place for the first time in eight years as the leading corn-producing state. The corn crop for the year was second in size to that of Illinois.

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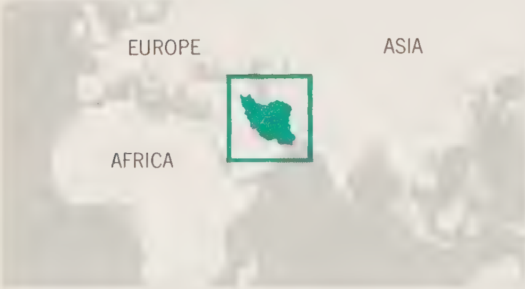
IRAN



The existence of underlying political unrest in Iran was revealed during 1965 by the assassination in January of Premier Hassan Ali Mansur and by an unsuccessful attempt in April against the life of Shah Mohammed Reza Pahlavi. The government of the shah remained firmly in control, however, and the new premier, Amir Abbas Hoveida, pushed ahead with the so-called revolution from the throne, a program aimed at economic development, political reform, and social modernization.

The country, emerging from a depression which had gripped the business community between 1961 and 1964, appeared increasingly prosperous, though agricultural development and private investment in industry lagged. Fears were expressed over the disruptive effects of inflation and sharply rising imports.

Assassination of Mansur. Premier Mansur, who had held office since March 7, 1964, was shot while on his way to address a session of the Majlis (National Assembly) on Jan. 21, 1965, and died five days later. The assassin and three accomplices were identified as adherents of Fedayan Islam, a reactionary religious group opposed to modernism and secularism. All four were condemned to death by a military tribunal in Teheran on May 9 and executed by a firing squad on June 16.

On January 27 the shah appointed as premier Amir Abbas Hoveida, the finance minister in Mansur's cabinet and a man closely connected with the reform program. Hoveida retained Mansur's cabinet virtually unchanged and pledged his government to carry out the full program of his predecessor. He received an overwhelming vote of confidence in the Majlis on January 31.

Attack on the Shah. On April 10 a young conscript in the shah's guard, Reza Shamsabadi, fired at the ruler outside his office in the Marble Palace. The shah escaped uninjured, and the attempted assassin was killed on the spot. The government later announced that the attack on the shah had been part of a plot to launch a nationwide campaign of terror, and that it had been attempted by a Communist-oriented group of Iranian graduates of foreign universities who had participated in the antimonarchical student movement abroad. Six persons were arrested for complicity in the plot.

Economic Planning. Efforts were made during 1965 to speed up the lagging Third Economic Development Plan (1962–68), under which the gross na-

IRAN · Information Highlights

Area: 636,363 square miles.
Population: 22,860,000 (July 1, 1964 est.).
Chief Cities (1963 est.): Teheran, the capital, 2,317,116; Tabriz, 387,803, Isfahan, 339,909; Meshed, 312,186.
Government: *King*—Shah Mohammed Reza Pahlavi (b. 1919; acceded 1941); *Premier*—Amir Abbas Hoveida (took office Jan. 27, 1965). *Parliament*—Majlis (National Assembly), 200 members; Senate, 60 members.
Religious Faiths: Muslims, 98% of population.
Education: *Literacy rate* (1956)—13% of population aged 15 and over. *Total school enrollment* (1962–63)—2,099,163 (primary, 1,719,426; secondary, 325,454; teacher-training, 5,726; technical and vocational, 9,197; higher, 39,360).
Finance (1965 est.): *Revenues*, $909,000,000; *expenditures*, $1,019,000,000; *public debt*, (1964) $840,000,000; *monetary unit*, rial (75.75 rials equal U.S.$1).
Gross National Product (1963): $4,879,000,000.
National Income (1963): $4,317,000,000; average annual income per person, $195.
Economic Indexes: *Agricultural production* (1964), 137 (1956–57=100); *cost of living* (1964), 132 (1958=100).
Manufacturing (metric tons): Gasoline (1963), 2,624,000; wheat flour (1962), 1,585,000; cement (1964), 745,000; beet sugar (1964), 177,000.
Crops (metric tons, 1964–65 crop year): Wheat, 2,750,000 (ranks 17th among world producers); rice, 860,000 (rank, 18th); tea, 12,900 (rank, 9th); barley, 893,000; cottonseed, 216,000; dates, 285,800; oranges, 45,000.
Minerals (metric tons, 1964): Crude petroleum, 618,731,000 barrels (ranks 6th among world producers); natural gas (1963), 108,511,000,000 cubic feet (rank, 11th); gypsum, 1,179,000 (rank, 9th); salt (1963), 345,000; bituminous coal, 200,000; chromite (1963), 100,000 (rank, 7th).
Foreign Trade (1964): *Exports*, $1,254,000,000 (chief export, petroleum, $1,110,000,000); *imports*, $673,000,000 (chief imports, 1962: iron and steel, $78,745,000; pharmaceuticals, $26,513,000; chemicals, $24,174,000). *Chief trading partners* (1962): Britain (took 16% of exports, supplied 19% of imports); West Germany (took 11% of exports, supplied 18% of imports); U.S. (took 4% of exports, supplied 19% of imports).
Transportation: *Roads* (1964), 20,063 miles (3,528 paved); *motor vehicles* (1964), 177,000 (automobiles, 127,000); *railways* (1963), 2,174 miles; *merchant vessels* (1964), 4 (28,000 gross registered tons); *national airline*, Iran National Airlines; *principal airport*—Teheran.
Communications: *Telephones* (1964): 160,000; *television stations* (1964), 3; *television sets* (1964), 100,000; *radios* (1963), 1,600,000; *newspapers* (1961), 27.

tional product had increased only 3%, instead of the projected 6%, in 1964. In presenting the 1965–66 budget to the Majlis in March, Premier Hoveida said that the government intended to step up the tempo of investment and create more jobs, while stabilizing prices and improving the foreign exchange balance. The development budget provided for expenditures of 55.4 billion rials.

The major source of funds for the development program was the government's revenue from petroleum exploitation. Foreign loans and grants, however, significantly augmented this income. On April 28, for example, the World Bank approved loans totaling $40.5 million to extend the main highway network northeast to the Afghan border and southeast to the new port at Bandar Abbas, and to construct feeder roads. At the same time, the Export-Import Bank of Washington announced a $20 million loan for the purchase and installation of two 82.5 megawatt electrical generating units at Teheran.

Land Reform. The final phase of the government's land reform program, the breaking up of medium-size estates, moved forward slowly. On April 24, representatives of 14,000 farmers received from the shah titles to lands in expropriated villages. However, uncertainties in the scheduling of the program, lack of knowledge and finances by farmers, and the insufficient number and inexperience of the recently established cooperatives limited agricultural production. The shah therefore fostered the creation of an Agricultural Extension and Development Corps—modeled on the already functioning Literacy Corps and Health Corps—to employ young men eligible for the draft but not needed in military service, in helping farmers to develop their land and encouraging them to join cooperatives.

Petroleum Developments. Oil production by the international consortium that operates the Iranian oil industry on behalf of the government-owned National Iranian Oil Company (NIOC) showed moderate growth over 1964. However, competition from North Africa and other oil-producing areas tended to limit Iran's oil exports. A new agreement with the consortium, ratified by the Majlis in January, increased the government's oil revenues by some $30 million annually. On February 7 the Majlis approved agreements between NIOC and five groups of international oil companies for the exploration and exploitation of offshore areas in the Persian Gulf. Iran received an initial payment of $185 million for the exploration rights and entered into arrangements by which 75% of the profits from exploited petroleum would accrue to NIOC and the government.

Foreign Affairs. Iran continued its alliance with the West through its membership in the Central Treaty Organization (CENTO), in which Britain, Turkey, and Pakistan are members and the United States is an active participant. The CENTO Ministerial Council held its 13th meeting in Teheran, April 7–9. Early in June, the 3,060-mile CENTO microwave telephone line between Ankara (Turkey), Teheran, and Karachi (Pakistan) went into full operation. Iran also participated with Turkey and Pakistan in the work of the Regional Cooperation for Development Group, established in July 1964, which sought to foster closer economic, technical, and cultural cooperation among the three states, outside the CENTO alliance.

The Indian-Pakistani clash over Kashmir in the summer and autumn of 1965 created a difficult problem for Iran, whose ties of religion and alliance to Pakistan were close but whose relations with India were also cordial. Early in September, Pakistan invoked the CENTO pact and requested support from her partners. In response, Iran joined Turkey in pledging material aid. On September 14, Premier Hoveida flew to Rawalpindi, to discuss assistance to Pakistan, but also to urge peaceful settlement of the dispute. The cease-fire arranged by the United Nations on September 23 was welcomed in Teheran.

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IRAQ

President Abdul Salam Arif of Iraq, who had seized control of the government in 1963, continued to maintain himself in power during 1965 by playing Baathist and Nasserite political forces against one another. However, he appeared to be in an increasingly isolated position and was dependent on the backing of the army. In September an attempted coup against Arif was crushed by loyal troops.

Little progress was made toward the restoration of constitutional government, which had been promised in the provisional constitution promulgated in May 1964. The project for a political union of Iraq and the United Arab Republic, developed by Presidents Arif and Nasser in 1964, moved forward only at a snail's pace. Kurdish unrest still festered in the north. The initiation of an ambitious five-year development plan provided some impetus to the country's economic activity, but political uncertainty still hampered the partially nationalized Iraqi economy.

Political Developments. Shifts in the cabinet of Premier Taher Yahya on Nov. 14, 1964, had strengthened the Nasserite element within the government. Early in July 1965, however, six Nasserite cabinet members resigned, charging that President Arif and Premier Yahya had been dilatory in implementing Arab socialism and in forwarding union with the United Arab Republic. On September 2, Premier Yahya resigned, and four days later President Arif appointed as premier Brigadier Arif Abdul Razzak, commander of the Iraq air force and a

PRESIDENT ABDUL SALAM ARIF of Iraq inspects a mountain area in northern Iraq inhabited by Kurdish rebels.

UPI

IRAQ · Information Highlights

EUROPE
ASIA
AFRICA

Area: 173,259 square miles.
Population: 7,004,000 (July 1, 1964 est.).
Chief Cities (1964 est.): Baghdad, the capital, 436,731; Karradah, 268,253; Mosul, 218,149; Adhamiyah, 205,304.
Government: *President*—Col. Abdul Salam Muhammed Arif (took office Feb. 9, 1963); *Premier*—Abdul Rahman al-Bazzaz (took office Sept. 22, 1965); *Parliament*—All legislative power is vested in the National Council of the Revolutionary Command (NCRC), whose numbers have not been announced.
Religious Faiths: Muslims, 96% of population; Christians, 3%; others, 1%.
Education: *Literacy rate* (1957)—15% of population aged 15 and over. *Total school enrollment* (1962)—1,054,872 (primary, 849,682; secondary, 175,986; teacher-training, 7,235; technical, 7,268; higher, 14,701).
Finance (1964 est.): *Revenues*, $160,524,000; *expenditures*, $234,612,000; *public debt*, $228,424,000; *monetary unit*, dinar (0.3571 dinar equals U.S.$1).
Gross National Product (1963): $1,645,280,000.
National Income (1963): $1,443,120,000; average annual income per person, $210.
Economic Indexes (1964): *Industrial (petroleum) production*, 172 (1958=100); *agricultural production*, 99 (1956–57=100); *cost of living*, 108 (1958=100).
Manufacturing (metric tons): Cement (1964), 1,075,000; gasoline (1963), 262,000; sugar (1963), 3,000; wool yarn (1962), 1,000.
Crops (metric tons): Wool (1963), 12,700 (ranks 17th among world producers); wheat (1964), 807,000; barley (1964), 618,000; dates (1963), 300,000; rice (1964), 184,000; dry beans (1962), 14,000; tobacco (1964), 10,100; sesame (1963), 8,100.
Minerals (metric tons, 1964): Crude petroleum, 459,290,000 barrels (ranks 7th among world producers); gypsum, 499,000 (world rank, 17th); salt, 40,000; natural gas (1961), 23,773,000,000 cubic feet.
Foreign Trade (1964): *Exports*, $840,000,000 (chief export: crude petroleum, $789,040,000); *imports*, $413,000,000 (chief imports, 1963: tea, $24,528,000; motor vehicles and parts, $19,964,000; chemical and pharmaceutical products, $15,932,000). *Chief trading partners* (1963): Britain (took 15% of exports, supplied 16% of imports); West Germany (took 10% of exports, supplied 10% of imports); Italy (took 16% of exports, supplied 3% of imports).
Transportation: *Roads* (1964), 12,919 miles (4,033 paved); *motor vehicles* (1964), 78,200 (automobiles, 53,100); *railways* (1963), 1,026 miles; *merchant vessels* (1964), 2 (12,000 gross registered tons); *national airline*, Iraqi Airways; *principal airports*—Baghdad; Basra.
Communications: *Telephones* (1964): 59,831; *television station* (1964), 1; *television sets* (1964), 100,000; *radios* (1962), 100,000; *newspapers* (1963), 8 (daily circulation, 85,000).

strong Nasserite. On September 15, while President Arif was attending the third Arab summit conference at Casablanca, Razzak attempted to seize control of the country, pledging immediate union with the United Arab Republic. The coup was foiled by a brother of the president, General Abdul Rahman Arif, the deputy chief of staff. A new cabinet, headed by Premier Abdul Rahman al-Bazzaz, was installed in Baghdad on September 21.

Moves Toward Arab Union. A United Political Command for the United Arab Republic and Iraq, consisting of 13 UAR and 12 Iraqi representatives, was formally constituted on Dec. 20, 1964. It met for the first time in Cairo from May 19 to 25, 1965. However, the first year of the projected two-year transition period to complete unity passed with few concrete steps taken toward the amalgamation of the two countries.

Kurdish Unrest. There was no resolution of the Kurdish rebellion which had plagued northern Iraq since 1961. In January a spokesman for the Kurdish leader, Mustafa Barzani, charged that the government was still ignoring its promise to effect Kurdish autonomy.

Nationalization Program. Following the complete nationalization of banking and insurance and the partial nationalization of industry and trade in July 1964, the government organized the socialized sector of the economy into four General Economic Establishments for banking, insurance, industry, and trade. By mid-1965 about 75% of the country's manufacturing industry (in terms of capital investment) was state operated, and about 55% of foreign commerce was controlled by the General Economic Establishment for Trade. In November, however, the Bazzaz government published a decree liquidating the centralized General Economic Establishments. The government announced that it planned no further seizures of private enterprises, and it encouraged private investment in agriculture, small-scale industry, and domestic trade.

New Development Plan. The five-year economic development plan for 1965–70, inaugurated on April 1, was designed to produce a growth of 8% per year in national income (compared with an average annual growth rate of 6.5% over the previous ten years). Investment in the program was scheduled at $2.3 billion, of which 78% was expected to come from public sources, chiefly the government's oil revenues.

Oil Agreement. Settlement was announced on June 6 of the long dispute between the government and the internationally controlled Iraq Petroleum Company over the government's expropriation in 1961 of the company's unexploited concession area and over pricing and royalty policies. The government restored 0.5% of the expropriated area and agreed to a royalty formula already accepted by the other Middle Eastern oil-producing states, under which Iraq received an additional payment of $19 million for 1964. The Iraq Petroleum Company ended its objections to the exploitation of Iraqi oil by other foreign companies, and agreed to participate on a 25–75% profit-sharing basis with the state-owned Iraq National Oil Company in joint ventures in the expropriated concession area.

Foreign Affairs. Early in the year Baghdad gave strong support to the United Arab Republic in its efforts to mobilize the Arab world against West Germany's diplomatic recognition of Israel. On May 12, Iraq was the first of the Arab League states to formally break diplomatic relations with Bonn. Baghdad also supported Arab League projects to divert the waters of the Jordan River away from Israel and the efforts of the Palestine Liberation Organization to establish a Palestine-Arab political entity.

In general, Iraq adhered to a policy of nonalignment between the Communist states and the West in its foreign policy in 1965. In March the minister of industry paid a visit to Moscow, and on his return announced that the obstacles which had hindered the full implementation of the Iraqi-Soviet economic and technical assistance pact of 1959 had been removed. On the other hand, a number of large development contracts were awarded to American and western European firms.

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IRELAND

EUROPE
ASIA
AFRICA

On January 14, in Belfast, Northern Ireland, a historic meeting took place between Sean Lemass, prime minister of Ireland, and Captain Terence O'Neill, prime minister of Northern Ireland. The two men discussed the promotion of good relations and economic cooperation between north and south. This was the first such meeting since the partition of Ireland under the Anglo-Irish Treaty of 1921. The two prime ministers continued their talks in Dublin in February.

General Elections. In the general election of April 7, voters returned Lemass' Fianna Fáil party to power, with 72 seats in the Dail (house of representatives). The Fine Gael party won 47 seats; Labour, 22; and the Independents, 3. The new Dail met on April 21 and re-elected Lemass prime minister. In the Senate elections, held in May and June, the Fianna Fáil party won 31 seats; the Fine Gael, 13, the Independents, 10; and Labour, 6.

IRELAND · Information Highlights

Area: 27,135 square miles.
Population: 2,849,000 (July 1, 1964 est.).
Chief Cities (1961 census): Dublin, the capital, 537,448; Cork, 77,980; Limerick, 50,786; Dun Laoghaire, 47,792.
Government: *President*—Eamon de Valera (took office June 25, 1959); *Prime Minister*—Sean F. Lemass (took office Oct. 11, 1961). *Parliament*—Senate, 60 members; House of Representatives, 144 members; party seating (1965)—Fianna Fáil, 72; Fine Gael, 47; Labour, 22; Independent, 3.
Religious Faiths: Roman Catholics, 94%; Protestants, 5%; others, 1%.
Education: *Total school enrollment* (1962)—673,609 (primary, 516,419; secondary, 91,705; technical, 50,110; higher, 15,375).
Finance (1964): *Revenues*, $561,596,000; *expenditures*, $669,256,000; *public debt* (1963), $1,525,720,000; *monetary unit*, pound (0.3571 pound equals U.S.$1).
Gross National Product (1964): $2,590,000,000.
National Income (1964): $2,086,000,000; average annual income per person, $732.
Economic Indexes (1964): *Industrial production*, 160 (1958=100); *agricultural production*, 122 (1956–57=100); *cost of living*, 117 (1958=100).
Manufacturing (metric tons 1964): Cement, 973,000; processed meat (1962), 285,000; wheat flour, 237,600; sugar, 142,000; crude steel, 20,000; wool yarn, 7,800.
Crops (metric tons, 1964): Oats, 376,000 (ranks 20th among world producers); wool (1963), 11,900 (world rank, 19th); potatoes, 1,526,000; sugar beets, 893,000; barley, 551,000; wheat, 305,000.
Minerals (metric tons, 1964): Barite, 62,259 (ranks 13th among world producers); anthracite coal, 145,000 (world rank, 20th); gypsum, 228,000; copper (1962), 2,388.
Foreign Trade (1964): *Exports*, $623,000,000 (chief exports, 1963: cattle, $116,542,000; fresh beef, $45,108,000; beer, $19,270,000; bacon and ham, $18,833,000); *imports*, $974,000,000 (chief imports, 1963: iron and steel, $247,520,000; coal, $233,464,000; agricultural machinery, $178,800,000). *Chief trading partners* (1963): Britain (took 72% of exports, supplied 51% of imports); United States (took 8% of exports, supplied 6% of imports); West Germany (took 3% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 52,287 miles (35,478 paved); *motor vehicles* (1964), 311,694 (automobiles, 254,494); *railways* (1963), 1,458 miles; *merchant vessels* (1964), 20 (136,000 gross registered tons); *national airline, Aer Lingus* (Irish International Airlines); *principal airport*—Dublin.
Communications: *Telephones* (1964): 192,558; *television stations* (1964), 9; *television sets* (1964), 300,000; *radios* (1964), 538,000; *newspapers* (1963), 7 (daily circulation, 681,000).

Economy. A substantial increase in imports in 1965, combined with a decrease in exports, produced a deficit in Ireland's balance of payments. In an effort to control its growing economic and financial difficulties, the government put restrictions on loans and installment buying.

London Meeting. On July 26, Prime Minister Lemass met in London with British Prime Minister Harold Wilson to discuss ways of strengthening Ireland's economic ties with the United Kingdom. On December 14 they signed a free trade agreement under which import duties in both countries will be gradually reduced until such duties are abolished by 1975.

Casement's Reburial. The British government repatriated the remains of Roger Casement, the Irish patriot executed by the British in August 1916 on a charge of treason. Casement's remains were secretly flown to Dublin, where they lay in state for five days. Casement's interment took place in Glasnevin Cemetery on March 1.

Yeats Centennial. Ireland celebrated the "Year of Yeats" in 1965, to commemorate the 100th anniversary of the poet's birth. Tributes were paid, and scholarly papers were read throughout the world.

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IRELAND, Northern. See NORTHERN IRELAND.
IRON. See MINING—*Mineral Production;* STEEL.
ISLAM. See RELIGION.

ISRAEL

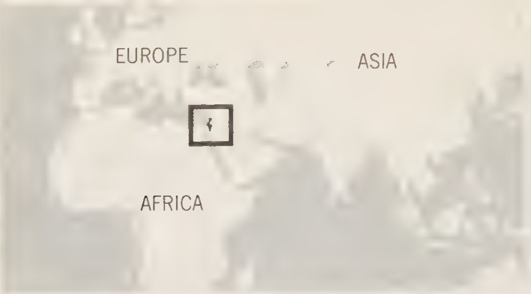
The principal events in Israel in 1965 were elections to the Knesset (parliament) and establishment of diplomatic relations with the government of West Germany.

Elections. Israel's political future was more uncertain in 1965 than at any time since the achievement of independence in 1948. In preparation for elections to the Knesset on November 2, two opposition parties of the political right—Herut (the old Revisionists) and a majority of the Liberals (formerly called the General Zionists)—announced in May that they would present a joint list of candidates and adopt a common platform. A few days later the ruling Mapai (Labor) party announced a similar alignment with Achdut Ha'Avoda, which is slightly farther to the political left than Mapai. The major left-wing parties competing in the November election were Mapam and the Communists, and in August the Communists split into Jewish and Arab factions.

The political realignments were further complicated by the deepening feud within Mapai itself between 78-year-old former Premier David Ben-Gurion and Premier Levi Eshkol. The dispute culminated on July 23 in Mapai's expulsion of Ben-Gurion and six of his associates. They formed a rival party, the Israel Workers' List (its Hebrew initial letters spell "Rafi").

The September 19 elections to the Histadrut (national labor federation) constituted a trial run for the Knesset elections, since two thirds of the national electorate votes in the Histadrut elections. Rafi won 12% of the votes, effecting in part a reduction of votes for the Mapai-Achdut Ha'Avoda alliance to 51% from the 72% that the two parties had secured when each ran separately in the 1959 Histadrut elections. The right-wing opposition advanced to

ISRAEL · Information Highlights



Area: 7,992 square miles.
Population: 2,563,000 (June 30, 1965, est.).
Chief Cities (1963 est.): Jerusalem, the capital, 181,000; Tel Aviv-Jaffa, 394,400; Haifa, 195,400.
Government: *President*—Zalman Shazar (elected 1963); *Premier*—Levi Eshkol (appointed Jan. 12, 1966); *Parliament*—Knesset, 120 members; party seating (1965)—Mapai-Achdut Ha'Avoda, 45; Herut-Liberal, 26; National Religious party, 11; Rafi, 10; Mapam, 8; Independent Liberal party, 5; Agudat Israel, 4; others, 11.
Religious Faiths: Jews, 89% of population; Muslims, 8%; Christians, 2%; Druse, 1%.
Education: *Literacy rate* (1961)—84% of population aged 14 and over. *Total school enrollment* (1962–63)—560,500 (primary, 440,000; secondary, 104,000; higher, 16,500).
Finance (1965 est.): *Revenues*, $856,000,000; *expenditures*, $1,117,000,000; *monetary unit*, Israeli pound (3 pounds equal U.S.$1).
Gross National Product (1964): $2,857,000,000.
National Income (1964): $2,358,000,000; average annual income per person, $952.
Economic Indexes (1964): *Industrial production*, 220 (1958=100); *agricultural production*, 225 (1956–57=100); *cost of living*, 136 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,030,000; gasoline (1963), 315,000; wheat flour, 242,400; crude steel, 67,000; sugar, 36,000; beer (1963), 25,300.
Crops (metric tons, 1964): Citrus fruits, 736,000 (ranks 8th among world producers); sugar beets, 256,000; wheat, 127,000; grapes, 70,000; cottonseed, 25,000; olives (1963), 17,000; figs (1963), 16,400; cotton lint, 15,000.
Minerals (metric tons, 1964): Potash, 300,000; phosphate rock, 240,000; gypsum, 109,000; agricultural peat, 54,000; salt (1963), 52,000; crude petroleum, 1,435,000 barrels; natural gas, 1,069,000,000 cubic feet.
Foreign Trade (1964): *Exports*, $372,400,000 (chief exports: gem diamonds, $135,000,000; citrus fruits, $66,000,000); *imports*, $826,200,000 (chief imports, 1963: gem diamonds, $100,189,000; nonelectrical machinery, $84,469,000; iron and steel, $43,354,000). *Chief trading partners* (1963): U.S. (took 13% of exports, supplied 28% of imports); Britain (took 14% of exports, supplied 20% of imports); West Germany (took 11% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 2,384 miles (2,088 paved); *motor vehicles* (1964), 112,000 (automobiles, 74,000); *railways* (1963), 265 miles; *merchant vessels* (1964), 74 (504,000 gross registered tons); *national airline*, El Al; *principal airport*, Tel Aviv-Lod.
Communications: *Telephones* (1964): 185,358; *radios* (1962), 539,000; *newspapers* (1962), 25.

15% of the total from the 3% it had taken in 1959 (Herut not then competing), and the left-wing opposition (Mapam and the Communists) obtained 17% of the total vote.

In the Knesset elections on November 2, the Mapai-Achdut Ha'Avoda coalition won 45 of the 120 seats. The Herut-Liberal coalition won 26 seats; the National Religious party, 11; Rafi, 10; Mapam, 8; and the Independent Liberals, 5. The remaining 15 seats were scattered among 7 minor parties.

Premier Levi Eshkol had difficulty in forming a cabinet because he was unable at first to receive the support of the National Religious party and the Agudat Israel Workers' party, both members of the old coalition. It was not until Jan. 12, 1966—more than two months after the election—that Eshkol's new cabinet was sworn in. It was made up of the Mapai-Achdut Ha'Avoda combination, the National Religious party, Mapam, and the Independent Liberals. The Agudat Israel Workers' party was not represented in the cabinet, but was counted as a reliable supporter of the government.

Relations with West Germany. In the field of international affairs the most important event for Israel in 1965 was the establishment of full diplomatic relations with West Germany, which had been delayed for years because of Israeli memories of the Nazi regime. The Arab League sought to deter the exchange of ambassadors between Israel and West Germany by threatening to break off relations with West Germany and to recognize instead the Communist regime of East Germany. The West German government, although it publicly regretted the breach with all but three of the Arab states that resulted from the action, was not intimidated.

Dr. Rolf Pauls presented his letters of credence as German ambassador in Jerusalem on August 19. His arrival was marked by hostile demonstrations less severe than expected, but which resulted, nevertheless, in injuries to six Israeli policemen and five civilians. David Asher Ben-Nathan arrived to take up his duties as Israeli ambassador in Bonn on August 24.

Relations with Arab States. In 1965 there were no clashes between Israel and the Arab states serious enough to invite recourse to the UN Security Council. As a substitute for more decisive official Arab action, a militant organization known as Al Fatah (The Conquest) launched some 17 sabotage attacks into Israel during the year. Israelis suspected that the organization was supported by the Syrian regime but operated from bases in other Arab countries as well, particularly Jordan.

The Israeli army made reprisal attacks on the Jordanian towns of Shuna, Jenin, and Qalqiliya on May 27, and on Qalqiliya and its environs on the night of September 4–5. Fifteen more Al Fatah incursions were reported during the next two months.

UPI

ISRAELI TROOPS return to base after blowing up 11 water pumps near Jordanian town of Qalqiliya on the night of Sept. 4–5, 1965. The raid was a reprisal against sabotage attacks on Israeli territory made by militant Arab organization Al Fatah (The Conquest).

Syrian tanks and artillery clashed openly with Israeli forces just north of the Sea of Galilee on August 12. Israel made a reprisal raid into Lebanon on October 28.

A scheme proposed at the Arab summit conference in September 1965 suggested countering Israel's diversion of water from the Jordan River by diverting those headwaters of the Jordan that rise in Arab territory. The plan did not mature, however, mainly because the prudent Lebanese were reluctant to become seriously involved and because the United Arab Republic, which at that time had 50,000 troops stationed in Yemen, was unable to support the proposal to the extent demanded by the Syrian regime.

Economy. While Israel's gross national product increased by 11% in 1964 compared with 1963, its balance-of-payments deficit on current account increased by 13% and the foreign trade deficit rose by 14% during the same period.

Average wages and salaries in the public services rose by 14% in 1964, and another large increase occurred in 1965 because arrangements for retroactive pay raises took effect. The government and the Histadrut were blamed for laxity on wage policy that might slow down economic expansion.

On November 3 the ancient port of Jaffa and the newer port of Tel Aviv were closed down. The country's operating ports are Haifa and Ashdod, a new port on the Mediterranean Sea coast situated 20 miles south of Tel Aviv.

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ITALIAN LITERATURE

Publication of a great many books marked the 700th anniversary of Dante's birth, which was celebrated throughout Italy in 1965. Important contributions to the study of the great poet were made by the two-volume collection of papers presented at the International Congress of Dante scholars in April. Among works for the general public, Indro Montanelli's vivid and brittle *Dante e il suo secolo* won popular acclaim and became a best seller as a paperback. A new illustrated edition of the *Divina Commedia* that could be bought in cheap weekly installments at the newsstands reached a surprisingly large circulation (over 200,000 copies). These developments show that Dante is still very much alive in his native country, and they also indicate the spectacular expansion of paperbacks and the emergence of a mass readership.

Fiction. The year was fertile in significant and widely read novels. The most controversial was Alberto Moravia's *Attenzione,* an intellectual mixture of psychology, sex, and speculations on the nature of fiction. Its hero, Francesco Merighi, is a journalist who returns home after years of travel. He finds out that he has fallen in love with his stepdaughter and that his wife, from whom he was alienated for a decade, leads a double life and is a procuress. Merighi notes these discoveries, and the emotions they provoke, in a diary that he intends to use for a future novel. He soon arrives at the conclusion that the reality of life is not the reality of artistic creation, and that each novel is basically an autobiographical confession. Despite Moravia's narrative skill, *Attenzione* seems too artificial and too preoccupied with theoretical concepts; its protagonists never come to life.

Similar cerebral traits mark two other prominent novels of the year: Paolo Volponi's *La macchina mondiale,* which won the Strega Prize; and Goffredo Parise's *Il padrone,* which was awarded the Viareggio Prize. Volponi's hero, a half-educated peasant, imagines the universe as an immense machine and men as small machines. A rebel and a philosopher of sorts, he dreams of a better human society founded on reason and peace, but is crushed by the hostility of his environment and by an unhappy love. The story is often strange and abstract but is always redeemed by the author's poetic force and imagination. In *Il padrone,* a best seller, Parise portrays the morbid proprietor of a large commercial enterprise who pays lip service to liberal ideas but turns his employees into chattels. This plotless novel, obviously conceived under the strong influence of Kafka, is a satire on modern society. It is written in a sardonic style and portrays fantastic characters and uncanny episodes.

Several other novels retained the attention of critics and found large audiences. In *Gli onesti,* Bonaventura Tecchi contrasts the rigidly honest Filippo with his unscrupulous brother Renzo, but shows that virtue is valueless when not accompanied by love and tolerance. The novel is an old-fashioned realistic narrative. *La linea del Tomori,* by Manlio Cancogni, can be put in the same category. It depicts, with some lyrical charm, the childhood and adolescence of a highly sensitive individual who is later confronted with the ugliness of war and death during Mussolini's 1940–41 campaign in Greece. *Le trombe,* by Giuseppe Cassieri, is less traditional. Its protagonists are extravagant, and their adventures at the seashore are told in the sardonic manner so typical of Cassieri's work. Noteworthy also were Anna Maria Ortese's poetic *L'iguana,* Mario Pomilio's psychological and social narrative *La compromissione* (winner of the Venetian literary prize Il Campiello), and Ercole Patti's Sicilian tale *La cugina.*

Silone Case. Violent polemics were provoked in the Italian press by the decision of the Viareggio Prize jury to eliminate Ignazio Silone's *Uscita di sicurezza* from the competition. Silone's latest work consists of short stories and essays, including his recollections of the years when he was a member of the Communist party. The book was universally praised for its art and sincerity, and its rejection by the Viareggio judges appeared to be an act of political vengeance on the part of Communist sympathizers.

Essays. Among the numerous books of essays, *Il trucco e l'anima* by Angelo Maria Ripellino traces with absorbing interest the history of the Soviet theater in the 1920's and 1930's and the tragic fate of the great director Meyerhold. Also of great interest is *Il mito di Parigi* by the literary critic Giovanni Macchia. In *Il laboratorio,* the scientist Renzo Tomatis relates how he compared research in Italy and the United States and decided to remain in Chicago for both practical and idealistic reasons.

Poetry. Montale, Ungaretti, and Quasimodo remained in the foreground of Italian poetry, and various reprints of their old collections continued to have large circulation. The critics hailed *Gli strumenti umani* by Vittorio Sereni, a complex, at times difficult, but always perfect artist. The new works by the members of the avant-garde added little to what they have already published.

MARC SLONIM
Director, Sarah Lawrence College Foreign Studies

WIDE WORLD

MONT BLANC AUTO TUNNEL between Italy and France is officially opened on July 16 by Italian President Saragat (right, standing in car) and French President de Gaulle.

ITALY

The fragile center-left coalition government of Premier Aldo Moro remained in power throughout 1965, although it was weakened in December by the resignation of Foreign Minister Amintore Fanfani. During the year, Italy continued to push the causes of European unity and international peace, while surmounting the worst effects of the economic recession of 1963–64.

POLITICAL DEVELOPMENTS

Repercussions of the parliamentary crisis of December 1964 dominated the first weeks of the new year. A protracted struggle to elect a new president of the republic had ended on Dec. 28, 1964, when Parliament named Giuseppe Saragat for a seven-year term. During the election process, the center-left coalition—led by Christian Democrats and supported by Socialists, Social Democrats, and Republicans—had suffered severe strains. This majority bloc in Parliament had been unable to unite behind the Christian Democrats' own nominee, Giovanni Leone. It had also failed to agree on any other candidate, including left-wing Christian Democrat and former premier Fanfani, favored at one point by the Communists. On the 21st and final ballot, at least 100 Christian Democrats had refused to vote for Saragat, the coalition's compromise choice. The victory of Saragat, a right-wing Socialist, had been assured, however, by the unsought switch of Communist support.

Aftermath of the Election. The disarray of the center-left coalition led to heated debates within the four parties composing the bloc, and especially among the Christian Democrats, whose cohesion was almost destroyed. The predicament of the Christian Democrats aroused serious concern in Vatican circles. Moreover, Pietro Nenni's Italian Socialist Party (PSI) was greatly disturbed at the way in which its Christian Democratic allies had behaved during the presidential balloting.

Taking advantage of the confusion, Pietro Ingrao, leader of the left wing of the Italian Communist Party (PCI), announced on January 26 that his party hoped for an agreement with Catholic organizations and, indeed, with the Catholic masses. The answer to his bid was not long in coming. On January 31, Pope Paul VI revived the Catholic Action Society, the most strongly anti-Communist Catholic organization. This move may also have been intended as a warning to the Italian Christian Democratic Party that the church had an alternative to it if the party collaborated with the Communists. During ensuing weeks, the Vatican newspaper *L'Osservatore Romano* attacked Catholic advocates of a "dialogue" with communism. Early in March, Giorgio La Pira, the most prominent Catholic exponent of such an effort to find common viewpoints, failed to win reelection as mayor of Florence. By spring, nothing more was heard in Catholic circles of a dialogue with communism.

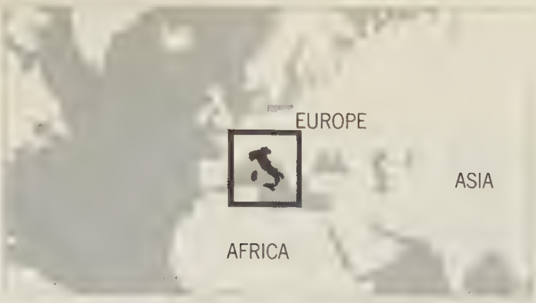
Meanwhile, early in February, the Christian Democrat Party National Council met. Giovanni Rumor, the middle-of-the-road party secretary general and a close political ally of Premier Moro, sought to promote harmony by persuading all factions to unite in framing a denunciation of communism. Mario Scelba and Amintore Fanfani, the respective leaders of the right-wing and left-wing factions of the Christian Democratic Party, de-

PIX

ALDO MORO, a Christian Democrat, was the youngest premier of Italy when he took office at the age of 47 on Dec. 5, 1963. He formed the first government since 1947 that included left-wing Socialists. The Vatican and Roman Catholic labor unions backed this "opening to the left," upon which Moro placed his hopes for a more equal distribution of Italy's wealth. Through political and economic crises, he has kept his center-left coalition in power for more than two years, although at the end of 1965 its future was uncertain.

Moro was born on Sept. 23, 1916, in Maglie, a town in southeastern Italy. He was graduated doctor of laws by the University of Bari in 1940 and then taught law there. After World War II, he joined the Christian Democratic party and worked his way up through party and cabinet posts to the position of party leadership, serving as secretary general in 1959–63. A staunch opponent of communism, Moro firmly supports the Atlantic alliance, improved East-West relations, and a supranational political organization for western Europe.

ITALY · Information Highlights



Area: 116,303 square miles.
Population: 52,829,000 (Sept. 30, 1965 est.).
Chief Cities (1964 est., communes): Rome, the capital, 2,455,302; Milan, 1,666,300; Naples, 1,220,639; Turin, 1,116,631.
Government: *President*—Giuseppe Saragat (elected Dec. 28, 1964); *Premier*—Aldo Moro (took office Dec. 5, 1963). *Parliament*—Senate (321 members); Chamber of Deputies (630 members). *Party Seating* (based on Chamber of Deputies elections, 1963)—Christian Democrats, 260; Communists, 166; Socialists, 62; Liberals, 39; Social Democrats, 33; Social Movement (neo-Fascist) Party, 27; Socialists of Proletarian Unity (PSIUP), 25; others, 18.
Religious Faiths: Roman Catholics, 99.5% of population.
Education: *Literacy rate* (1961)—92% of population aged 6 and over. *Total school enrollment* (1962–63)—6,446,208 (primary, 4,041,710; secondary, 1,653,218; teacher-training, 87,114; technical-vocational, 482,776; university, 181,390).
Finance (1964): *Revenues*, $8,049,000,000; *expenditures*, $8,949,000,000; *public debt*, $9,140,000,000; *monetary unit*, lira (625 lire equal U.S.$1).
Gross National Product (1964): $49,520,000,000.
National Income (1964): $38,973,000,000; average annual income per person, $765.
Economic Indexes (1964): *Industrial production*, 172 (1958=100); *agricultural production*, 118 (1956–57=100); *cost of living*, 124 (1958=100).
Manufacturing (metric tons, 1964): Cement, 22,840,000; crude steel, 9,793,000; wine, 6,612,000; gasoline (1963), 6,533,000; sugar, 1,080,000; meat, 781,200; olive oil, 320,000.
Crops (metric tons, 1964): Grapes, 10,243,000 (ranks 1st among world producers); wheat, 8,582,000 (world rank, 8th); sugar beets, 7,700,000 (world rank, 6th); corn, 3,929,000 (world rank, 10th); tomatoes, 2,950,000 (world rank, 2nd); olives, 1,792,000 (world rank, 1st); citrus fruits, 1,451,000 (world rank, 5th); oats, 465,000 (world rank, 16th); wool (1963), 12,500 (world rank, 18th).
Minerals (metric tons, 1964): Salt, 3,141,000 (ranks 9th among world producers); gypsum, 2,073,000 (world rank, 7th); bauxite, 236,000 (world rank, 19th); zinc, 116,499 (world rank, 9th); manganese, 47,783 (world rank, 20th); lead, 32,961 (world rank, 18th); magnesium, 5,534 (world rank, 5th).
Foreign Trade (1964): *Exports*, $5,956,000,000 (chief exports, 1963: automobiles, $248,000,000; knitted clothing, $222,000,000; footwear, $166,000,000; woolen fabrics, $141,000,000); *imports*, $7,231,000,000 (chief imports, 1963: crude petroleum, $671,000,000; corn, unmilled, $220,000,000; automobiles, $198,000,000). *Chief trading partners* (1963): West Germany (took 18% of exports, supplied 17% of imports); U.S. (took 9% of exports, supplied 14% of imports); France (took 10% of exports, supplied 10% of imports); Great Britain (took 5% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 120,918 miles (90,689 paved); *motor vehicles* (1964), 4,442,434 (automobiles, 3,864,150); *railways* (1963), 10,328 miles; *merchant vessels* (1964), 591 (5,092,000 gross registered tons); *state airline*, Alitalia; *principal airports*, Rome and Milan.
Communications: *Telephones* (1964): 5,056,947; *television stations* (1964), 61; *television sets* (1964), 4,285,000; *radios* (1963), 9,564,000; *newspapers* (1961), 91 (daily circulation, 5,000,000).

manded positions in the party's Executive Committee as well as in the national government. Only Fanfani was to succeed in achieving both of these goals. Scelba had to content himself with obtaining a seat in the party's Executive Committee. In a further move to appease the warring factions, a promise was made that a full-dress debate of party ideology would take place at the next Christian Democratic national congress.

In mid-February the Central Committee of the Italian Socialist Party decided, after much debate, to follow the advice of its elder statesman, Vice Premier Pietro Nenni, and keep the party in the center-left coalition government. It insisted, however, upon Christian Democratic support of more dynamic programs of economic and school reform, inclusion of Communist representatives in the Italian delegations to various European parliamentary bodies, and revision of the 1929 Lateran pacts with the Vatican. The religious issue became acute when authorities banned the performance in Rome, in February, of Rolf Hochhuth's play *The Deputy*, which is critical of Pope Pius XII's attitude toward the Nazi extermination of European Jews in World War II.

In the wake of these developments within the two major parties of the governing coalition, Premier Moro reshuffled his cabinet on March 5. He appointed Fanfani to the post of foreign minister, which had been vacated when Saragat was elevated to the presidency of the republic. He also named Senator Edgardo Lami Starnuti, a Social Democrat, to the post of minister of industry and trade.

Popular Front Proposal. On April 21, Communist Party Secretary Luigi Longo launched a new proposal. Discarding the unsuccessful Ingrao line of seeking a "dialogue" with the Catholics, Longo cautiously backed instead the recommendation of Giorgio Amendola, spokesman for the party's right wing, that the Communists should seek a kind of popular front—an alliance with the various Socialist parties. Longo suggested that unification of the working class could be achieved in two stages—first by a confederation of parties, and then by fusion.

Nenni's Italian Socialist Party delayed answering the Communists' bid until the results of Sardinia's elections of June 13–14 for a regional parliament could be analyzed. When it became apparent that the parties of the center-left coalition had either maintained or improved their position in Sardinia, the Socialist Party informed the Communists on June 25 that it was not interested in a popular front.

New Threats to the Coalition. In the autumn a new political stir occurred. Danilo Dolci, a controversial crusading investigator of Sicilian sociopolitical problems, unearthed evidence that since 1948 the Mafia in western Sicily had controlled the election to Parliament of Bernardo Mattarella, the Christian Democratic minister of foreign trade in Moro's cabinet. It seemed likely that this revelation would spark new unrest in the next PSI national congress, and might cause Vice Premier Nenni difficulty in once more persuading his party to stay in the government.

Foreign Minister Fanfani's resignation, accepted reluctantly by Premier Moro on December 29, posed a more serious threat to the government coalition and to Christian Democratic unity. Fanfani stated that his usefulness in the government had been damaged by remarks that his friend Giorgio La Pira had made in a press interview arranged by Mrs. Fanfani. The remarks, published by the rightist weekly *Borghese*, were critical of U.S. Secretary of State Dean Rusk and of Italian leaders. Earlier, Fanfani had transmitted to President Johnson possible peace overtures made by the North Vietnamese government through La Pira, who had visited Hanoi in November. The peace "feelers" had been quashed by their premature publication in the United States.

Moro was reported to believe that Fanfani, from his position outside the government, could mobilize leftist and rightist opposition behind some alternative to the center-left coalition. Fanfani's inclusion in the government, in March, had silenced this spokesman for the Christian Democratic left and had satisfied Socialist demands for greater left-wing representation in the government.

FOREIGN RELATIONS

Italy remained a staunch advocate of European economic and political unity in 1965, despite the roadblocks raised by President de Gaulle of France. While Italy maintained its commitment to NATO, it also made clear that it hoped to reduce tensions between East and West.

At the Council of Europe meeting in Strasbourg, France, in March, the Italian delegation took a major part in the debate that revived the goal of European political unity. The hopes for unity quickly dimmed however, when French Foreign Minister Couve de Murville made it clear in Rome on March 26–29 that such a goal was "premature."

On April 20, Premier Moro and Foreign Minister Fanfani flew to the United States for five days of talks with President Johnson and other officials. The Italians expressed "understanding" of United States policy in Vietnam.

On April 27–28, British Prime Minister Wilson conferred in Rome with Moro and Fanfani about economic cooperation and European unity. In May, Fanfani visited several Latin American states and then conferred again in Washington with United States leaders. Early in June he was in Paris for talks with de Gaulle and Couve de Murville.

In July, President Saragat made a state visit to West Germany. On July 16 he met with President de Gaulle at Courmayeur, Italy, to open the Mont Blanc highway tunnel between Italy and France. Saragat took the opportunity to reiterate Italy's desire for a more closely unified Europe. In October he made a state visit to Poland—the first to that nation by the head of a NATO country.

In September the UN General Assembly chose Foreign Minister Fanfani to serve as president for the ensuing term, so that an Italian might have the honor of presiding when Pope Paul VI made his speech there in October. (For a biographical sketch of Fanfani, see UNITED NATIONS.)

ECONOMY

After two years of economic setbacks, during which Italy had suffered a decline in exports, a serious balance-of-payments crisis, and a threat to the stability of the lira, the situation began to improve slowly in the fall of 1964. The lira was stabilized, gold reserves were built up again, and exports were gradually enlarged.

Expansion and Development. Late in March 1965, the Executive Committee of the European Economic Community advised the Italian government to relax the economic curbs it had imposed during the period of inflationary threat, and to increase public expenditure above the 5% ceiling set in 1964. The governor of the Bank of Italy, Guido Carli, stated in his annual report (May 31, 1965) that the economy was steadily improving, but he emphasized the need for more investments, especially in the construction of housing for persons of low and medium incomes. Carli attributed part of the difficulty in promoting expansion of this economic sector to a 9.4% rise in the cost of labor during 1964.

In June 1965 the government approved the new five-year economic development plan (1965–69), which called for a 5% annual increase in national productivity. It remained to be seen how successful the government's efforts would be in the face of frequent and often protracted strikes called by the Communist-dominated labor organizations and other groups. In May and June a particularly serious blow to business was caused by a slow-down strike on the part of customs inspectors, who insisted upon unloading all trucks and railway cars at the frontiers so that meticulous checks could be made of their contents.

Problem of the South. At the end of 1965 there continued to be marked disparity between prosperous northern Italy and the retarded south, just as there was between Italy and its more affluent neighbors to the north. Efforts were being made, however, to achieve an economy of full employment that would attenuate these differences.

Through the Southern Italy Development Fund (Cassa del Mezzogiorno), the government was investing huge sums in the south. Recent developments included the opening of a very modern steel mill in Taranto and the establishment of a variety of new industries in Apulia, Naples, eastern Sicily, and Sardinia. On June 26, President Saragat signed a bill that prolonged the Southern Italy Development Fund until 1980.

Great numbers of southern Italians continued to migrate to the industrial north and to neighboring countries. Switzerland, however, imposed severe restrictions on the influx of Italian workers.

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ROME'S ANCIENT COLOSSEUM provides a classical backdrop for the snow that covered the city on February 10.

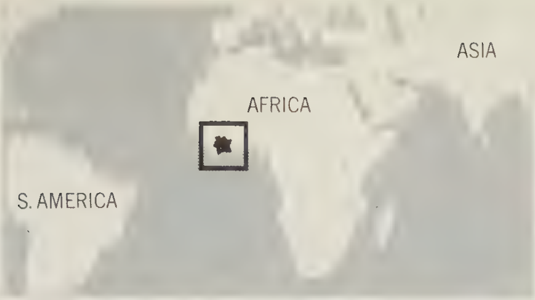
KEYSTONE

IVORY COAST

Félix Houphouët-Boigny was reelected president of the Ivory Coast in 1965. His ruling Democratic party demonstrated renewed self-confidence by holding a long overdue party congress in September in preparation for the November general elections. Earlier, the government had tried and sentenced a number of political opponents.

Ivory Coast continued to follow a path of economic development which, while avoiding "African socialism," involves substantial state investments in projects supported by foreign private capital.

Elections. In the November general elections, President Houphouët-Boigny, unopposed, was reelected to a 5-year term. The new National Assembly, increased from 70 to 85 members, was



IVORY COAST · Information Highlights

Area: 124,503 square miles.
Population: 3,750,000 (July 1, 1964, est.).
Chief City (1963 est.): Abidjan, the capital, 212,000 (urban area).
Government: *President and Premier*—Félix Houphouët-Boigny (took office Nov. 27, 1960). *Parliament*—National Assembly, 85 members, all belonging to the Democratic party.
Religious Faiths: Tribal religions, 65% of population; Muslims, 23%; Roman Catholics, 9%; others, 3%.
Education: *Total school enrollment* (1963–64)—357,640 (primary, 330,600; secondary, 24,250; technical, 2,200; university, 590).
Finance (1965 budget est.): *Revenues,* $166,000,000; *expenditures,* $130,000,000; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1962): $624,000,000.
Economic Index (1964): *Cost of living,* 111 (1960=100).
Manufacturing: Meat (1962), 15,000 metric tons; lumber (1963), 167,000 cubic meters.
Crops (metric tons, 1963–64 crop year): Sweet potatoes and yams, 1,916,000 (ranks 4th among world producers); cassava, 980,000 (world rank, 8th); coffee (1964–65), 210,000 (world rank, 3rd); cocoa beans (1964–65), 135,000 (world rank, 3rd); palm kernels, 10,400 (world rank, 13th); maize, 168,000; peanuts, 31,000; cottonseed, 8,000.
Minerals (1964): Manganese, 136,424 metric tons (ranks 13th among world producers); gem diamonds, 120,000 carats (world rank, 12th).
Foreign Trade (1964): *Exports,* $296,000,000 (chief exports: coffee, $128,000,000; wood, $72,000,000; cacao, $59,000,000); *imports,* $235,000,000 (chief imports, 1963: woven cotton fabrics, $15,000,000; agricultural machinery, $6,000,000; alcoholic beverages, $5,000,000). *Chief trading partners* (1963): France (took 47% of exports, supplied 66% of imports); U.S. (took 14% of exports, supplied 5% of imports); West Germany (took 6% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 20,412 miles (528 paved); *motor vehicles* (1964), 39,000 (automobiles, 23,000); *railways* (1963), 388 miles; *merchant vessels* (1964), 4 (16,000 gross registered tons); *civil airline,* Air Afrique; *principal airport,* Abidjan-Port-Buet.
Communications: *Telephones* (1964): 12,400; *television stations* (1964), 1; *television sets* (1964), 1,000; *radios* (1960), 55,000; *newspapers* (1962), 1 (daily circulation, 12,000).

elected without opposition to its Democratic party candidates. Women were candidates for the first time, and three will sit in the new Assembly.

Political Opposition. In December 1964 a nonpublic trial of prominent politicians involved in an alleged plot to overthrow the government in August 1963 was held in Yamoussoukro. The tribunal sentenced six plotters to death, two to life imprisonment, and 19 others to shorter jail terms.

President Houphouët-Boigny negotiated a reconciliation with university students in January, after which 14 students who had been arrested for plotting against the security of the state were released.

Economy. The Ivory Coast's economy seemed to inspire confidence among outside investors in 1965. This confidence was demonstrated by the announcement of loans by the U.S. Agency for International Development and the United Nations Social and Economic Council. The Ivory Coast also received a loan of $32 million from the European Economic Community (EEC) for growing and processing of palm kernels. This was the largest loan ever granted to an African country by the EEC.

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University of Chicago

JAMAICA

The government of Prime Minister Alexander Bustamante pushed its economic development program in 1965, in an effort to combat Jamaica's problems of high unemployment and a continuing trade deficit.

Economy. The economic development program received about $48 million of the $180 million allocated in the budget for the fiscal year 1965–66. New light industries for the manufacture of tires, fertilizer, textiles, and other products helped raise the gross domestic product by 7.5% in 1965. However, unemployment, representing nearly 25% of the labor force, remained a serious problem.

To combat Jamaica's chronic trade deficit, caused in part by large food imports, the government tried to enlarge the food-processing industry and introduced some mechanized agricultural methods.

Caribbean Cooperation Talks. Representatives of Jamaica, Barbados, Trinidad and Tobago, and British Guiana met in Georgetown, British Guiana, in March. Plans were made for cooperative efforts to solve mutual economic and social problems.

National Labour Party Elections. Prime Minister Alexander Bustamante was reelected president of the ruling Jamaica Labour party on Nov. 28, 1965.

N. AMERICA
S. AMERICA

JAMAICA · Information Highlights

Area: 4,232 square miles.
Population: 1,745,000 (Dec. 31, 1964 est.).
Chief Cities (1960 census): Kingston, the capital, 123,403; Montego Bay, 23,610; Spanish Town, 14,706.
Government: Governor-General—Sir Clifford Campbell; Prime Minister—Sir Alexander Bustamante. *Parliament*—Senate, 21 members (appointed by the governor); House of Representatives, 45 members; party seating (1965): Jamaica Labour party, 26; People's National party, 19.
Religious Faiths: Protestants, 74% of population; Roman Catholics, 8%; Hindus, 1%; others, 17%.
Education: *Literacy rate* (1960)—82% of population aged 15 and over. *School enrollment* (1963)—325,930 (primary, 306,491; secondary, 19,439).
Finance (1964–65 est.): *Revenues,* $164,274,000; *expenditures,* $165,919,000; *public debt* (March 1964), $141,412,000; *monetary unit,* pound (0.3571 pound equals U.S.$1).
Gross National Product (1964): $786,000,000.
National Income (1964): $678,000,000; average annual income per person, $392.
Cost-of-living Index (1964): 119 (1958=100).
Manufacturing (metric tons): Sugar (1964), 525,000; cement (1964), 281,000; beer (1962), 20,430; meat (1961), 17,000.
Crops (metric tons): Citrus fruit (1964–65), 118,000 (ranks 20th among world producers); bananas (1963–64), 281,000; sweet potatoes, yams (1962–63), 158,000; cassava (1962–63), 11,000.
Minerals (metric tons): Bauxite (1964), 7,936,000 (ranks 1st among world producers); limestone (1962), 1,708,000; gypsum (1964), 158,000; glass sand (1962), 6,648.
Foreign Trade (1964): *Exports,* $218,000,000 (chief exports: sugar, $61,000,000; aluminum, $50,000,000; bauxite, $44,000,000); *imports,* $282,000,000 (chief imports, 1963: fuel oils, $12,000,000; electrical machinery, $11,000,000; wheat meal, flour, $9,000,000). *Chief trading partners* (1963): U.S. (took 32% of exports, supplied 30% of imports); Britain (took 29% of exports, supplied 26% of imports); Canada (took 25% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 7,096 miles (1,160 paved); *motor vehicles* (1964), 54,700 (automobiles, 43,000); *railways* (1963), 205 miles; *internal airline,* Jamaica Air Services; *principal airports,* Montego Bay, Kingston.
Communications: *Telephones* (1964): 43,041; *television stations* (1964), 6; *television sets* (1964), 15,000; *radios* (1962), 210,000; *newspapers* (1962), 2.

UPI

PROTEST RALLY IN TOKYO, by 8,000 persons on February 1, calls for cancellation of scheduled visit to Japan of U.S. nuclear submarine *Sea Dragon* and ban on all atomic subs from Japanese ports. *Sea Dragon* docked at Sasebo the next day.

JAPAN

Japan continued to expand its international interests and responsibilities throughout 1965. While close relationship with the United States remained the cornerstone of the country's foreign policy, its attention during the year was centered largely in Asia and on domestic affairs.

The most significant development of the year was the signing on June 22 of an agreement to normalize relations with the Republic of Korea (South Korea) after 14 years of negotiation. Debate between the Sato government and opposition parties over ratification of the treaty remained the focal point of public interest for the rest of the year. Other major events included the visit of Prime Minister Eisaku Sato to Washington in January, ratification of International Labor Organization (ILO) Convention No. 87 in May, and the national election to the House of Councillors in July. The government's policy of "invitation diplomacy" brought about visits by a number of important international figures.

FOREIGN AFFAIRS

Cooperation with the United States in matters both of trade and diplomacy did not prevent Japan's increasing its trade with the Soviet Union and Communist China, although there was no significant change in diplomatic relations with the two countries. Relations with Nationalist China remained on a friendly basis. The treaty between Japan and South Korea was a step toward resolving inter-Asian conflicts, although sporadic demonstrations against it continued after it had been signed.

Japan and the U.S. The Japanese-U.S. relationship remained firm and mutually rewarding, based on common political systems and goals and a growing, balanced, two-way-trade amounting in 1965 to approximately $4.4 billion. A major achievement during the year was the successful conclusion of long-pending negotiations on an amendment to the U.S.-Japan civil aviation agreement. There was increasingly close cooperation in improving economic and welfare standards on Okinawa and elsewhere in the Ryukyu Islands, now under U.S. jurisdiction pending their return to Japanese control at an undetermined future date. Prime Minister Sato visited Okinawa on August 19–21, and stressed Japan's regard for the welfare of the Ryukyuan people, as well as the importance to Japan of U.S. military bases in the Ryukyus. (See PACIFIC ISLANDS.)

During an official visit to Washington in January, Sato conferred with President Johnson, Secretary of State Dean Rusk, and other U.S. officials. Foreign Minister Etsusaburo Shiina led a delegation of Japanese cabinet ministers to the fourth meeting of the Joint Committee on Trade and Economic Affairs, held in Washington on July 12–14. The sixth meeting of the Joint Security Consultative Committee, established under the U.S.-Japanese security treaty of 1960, was held in Tokyo on September 1.

U.S. Vice President Hubert Humphrey visited Tokyo on December 28–29, en route to Manila for the inauguration of Philippine President Marcos. Humphrey had an audience with Emperor Hirohito and talked with Prime Minister Sato, Foreign Minister Shiina, and other prominent officials. He asked the Japanese government to help bring about peace in Vietnam and urged it to give economic and medical aid to Vietnamese refugees.

Despite the Japanese government's support of U.S. policies in Asia, popular concern in Japan over the war in South Vietnam led to leftist criticism of U.S. actions, most notably the bombing of targets in North Vietnam, and opposition to the presence of U.S. military bases in Japan. No serious incidents resulted from this criticism, however, and heightened Japanese interest in the Vietnam situation led to a more balanced view of the U.S. role in Southeast Asia. By late fall there was an increased understanding of and confidence in U.S. policies and objectives in that area. There remained, however, popular concern over the possibility of an expanded war on the Asian mainland, and there was almost universal support for a negotiated settlement of the Vietnamese conflict.

Japan and the Soviet Union. While the Japanese-Soviet trade picture improved moderately during 1965, there was no significant change in diplomatic relations. Two-way trade in 1965 amounted to approximately $400 million. Negotiations held late in 1965 resulted in agreements to expand two-way commercial exchanges by about 10% in the next five years and to plan direct air service between Tokyo and Moscow in the summer of 1966.

Japan, Nationalist China, and Communist China. Japan continued to expand its trade with Communist China in 1965, but held to its policy of separating trade and diplomacy while maintaining its highly valued relationship with Nationalist China. The Japanese government agreed in April to provide Nationalist China with $150 million in government loans. But it would not provide long-term financing to facilitate exports of machinery and factory equipment to Communist China, and Peking therefore canceled contracts for a $26.5 million synthetic fiber plant and a $3.6 million freighter. Trade with Communist China nevertheless reached a high of $470 million in 1965.

Communist China's image in Japan was affected adversely by Peking's conduct of foreign affairs, most notably in connection with the abortive Algiers Conference, the dispute between India and Pakistan over Kashmir, and Chinese hostility toward the conservative Sato regime.

UPI

STUDENTS AND POLICE CLASH in Tokyo on June 21 during demonstration against Japanese–South Korean treaty that established diplomatic relations between the countries.

Japan and South Korea. Foreign Minister Shiina visited Seoul in February, initialing with Korean Foreign Minister Lee Tong Won a basic relations treaty calling for exchange of envoys and early trade and air transport talks. Negotiations continued through the spring on fishing rights and other disputed matters, economic aid to Korea by Japan, and the establishment of consulates. The treaty was formally signed in a nationally televised ceremony in Tokyo on June 22. The agreement opened a new and significant era in relations between the two Asian states.

The treaty was ratified by the Korean Assembly on August 13. In Japan, however, parliamentary opposition and street demonstrations by the leftist parties delayed Diet action, despite general popular acceptance of the treaty. A special Diet session was opened October 4, and debate and committee dis-

JAPAN · Information Highlights

Area: 142,726 square miles.
Population: 97,790,000 (May 1, 1965, est.).
Chief Cities (1963 est.): Tokyo, the capital, 8,733,000; Osaka, 3,197,000; Nagoya, 1,859,000; Yokohama, 1,590,000.
Government: *Emperor*—Hirohito; *Prime Minister*—Eisaku Sato (took office Nov. 9, 1964). *Parliament (Diet)*—House of Representatives, 463 representatives; party seating (1965): 285 Liberal Democrats, 145 Socialists, 23 Democratic Socialists, 4 Communists, 2 independents, 4 vacancies. House of Councillors, 249 members.
Religious Faiths: Shintoism and Buddhism.
Education: *Literacy rate* (1960)—98% of population aged 15 and over. *Total school enrollment* (1962–63)—22,303,837 (primary, 11,056,915; secondary, 10,519,818; university, 727,104).
Finance (1965 est.): *Revenues,* $11,217,000,000; *expenditures,* $10,783,000,000; *public debt* (1964), $1,308,000,000; *monetary unit,* yen (360 yen at par value equal U.S.$1).
Gross National Product (1964): $69,400,000,000.
National Income (1964): $55,100,000,000; average annual income per person, $569.
Economic Indexes (1964): *Industrial production,* 248 (1958=100); *agricultural production,* 124 (1956–57=100); *cost of living,* 132 (1958=100).
Manufacturing (metric tons, 1964): Gasoline (1963), 6,776,000; crude steel, 39,799,000; cement, 32,950,000; fuel briquets and packaged fuel, 4,082,000; wheat flour, 2,496,000; plastics and resins, 1,860,000; newsprint paper, 1,137,600.
Crops (metric tons, 1964): Rice, 16,989,000 (ranks 3rd among world producers); sweet potatoes and yams (1963), 6,662,000 (world rank, 1st); potatoes, 3,914,000 (world rank, 11th); barley, 1,203,000 (world rank, 16th); citrus fruit, 1,133,000 (world rank, 6th); soybeans, 240,000 (world rank, 6th); tea, 83,300 (world rank, 4th); sugar beets, 1,203,000.
Minerals (metric tons, 1964): Coal, 51,054,000 (ranks 11th among world producers); salt, 887,000 (world rank, 16th); gypsum, 753,000 (world rank, 13th); manganese, 282,975 (world rank, 10th); zinc, 215,548 (world rank, 7th); silver, 8,625,337 troy ounces (world rank, 7th); gold, 252,094 troy ounces (world rank, 10th).
Foreign Trade (1964): *Exports,* $6,674,000,000 (chief exports, 1963: ships and boats, $339,690,000; iron or steel universals, $317,610,000; cotton fabrics, $283,040,000; telecommunications apparatus, $282,760,000); *imports,* $7,948,000,000 (chief imports, 1963: crude and partly refined petroleum, $789,230,000; iron ore and concentrates, $354,310,000; greasy wool, $348,890,000). *Chief trading partners* (1963): U.S. (took 28% of exports, supplied 31% of imports); Australia (took 3% of exports, supplied 8% of imports); Canada (took 2% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 603,718 miles (24,607 paved); *motor vehicles* (1964), 3,278,000 (automobiles, 1,193,000); *railways* (1963), 12,749 miles; *merchant vessels* (1964), 1,272 (9,444,000 gross registered tons); *national airlines,* All Nippon Airlines, Japan Airlines; *principal airports,* Tokyo, Osaka, Nagoya.
Communications: *Telephones* (1964): 10,682,492; *television stations* (1964), 81; *television sets* (1964), 16,000,000; *radios* (1963), 19,318,000; *newspapers* (1962), 160 (daily circulation, 39,877,000).

WIDE WORLD

PREMIER EISAKU SATO (left) meets President Johnson in Washington on January 12 for talks on Asian problems.

EISAKU SATO, elected prime minister of Japan on Nov. 9, 1964, worked hard in 1965 to make good his promise that Japan would play a larger part in world affairs as well as in Asian politics. Some of his policies, such as adoption of a treaty with South Korea, met with violent opposition, and he had to deal with an economic recession that was only partially overcome by the end of the year. He continued to maintain his pro-Western policy and to recognize Nationalist China in spite of pressure from Communist China.

Sato comes from a prominent South Honshu family. His brother Nobusuke Kishi (who had changed his name from Sato) was prime minister of Japan from 1957 to 1960. Sato received a law degree from Tokyo University in 1924, and rose to head the national railway system. In 1948 he joined the Liberal Democratic Party, and held five separate cabinet appointments before he became prime minister.

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cussion were carried out despite dilatory tactics by the left. Violent parliamentary and public demonstrations against the treaty continued, but both houses ratified the pact in November, and the treaty entered into force in December. (See Asia.)

International Visitors. A number of distinguished dignitaries visited Japan during 1965. Among them were Indonesian Foreign Minister Subandrio, in February and May; British Parliamentary Undersecretary for Foreign Affairs Lord Walston, in April; Malaysian Prime Minister Tunku Abdul Rahman, in May; New Zealand Prime Minister Keith J. Holyoake, in July; and Uganda's Prime Minister Milton A. Obote, in July. Japan was host to the Ninth General Conference of the International Atomic Energy Agency in September. Soviet astronauts Andrian Nikolayev and Valentina Tereshkova (now Nikolayev's wife) visited Japan in October.

DOMESTIC AFFAIRS

Former Prime Minister Hayato Ikeda died of cancer on August 13, 11 months after illness had forced his resignation. After taking over as prime minister in November 1964, Sato strengthened his position within the ruling Liberal Democratic Party (LDP) while moving forward on a number of key domestic and foreign relations issues. In June he reorganized the cabinet he had inherited from Ikeda on relatively more conservative lines, holding over only Foreign Minister Shiina from the previous administration. Faction leader Ichiro Kono, Sato's chief rival for LDP leadership, died in July, leaving Sato at least temporarily in uncontested control of the conservative party.

Elections to the House of Councillors. Except in Tokyo, where they failed to elect any members to the House of Councillors in the July 4 elections and suffered heavy losses in the Tokyo Metropolitan Assembly election on July 23, the conservatives maintained their strength throughout the year, improving their position in some districts. As a result of the July elections, the parties were represented in the House of Councillors as follows: LDP, 140; Japan Socialist Party (JSP), 73; Komeito, 20; Democratic Socialist Party (DSP), 7; Japan Communist Party (JCP), 4; independents, 5.

Elections to the Tokyo Assembly. A major vote-buying scandal in the 120-member Tokyo Metropolitan Assembly led to the dissolution of the assembly in June and the indictment of several prominent LDP members, including the speaker, Sadao Koyama. The scandal cost the LDP a sizable part of its support in the ensuing election to the assembly on July 23, and its membership in that body was reduced from 69 to 38. The JSP increased its representation from 32 to 45, becoming the leading party in the assembly. The Komeito elected all 23 of its candidates. The JCP raised its representation from 2 to 9. The DSP elected 4 members, and there was one independent.

Opposition Parties. The Democratic Socialist party held its annual convention in February, reelecting its major officers and adopting a five-year program to strengthen the party and win support for its moderate Socialist policies.

The resignation in March of aging Japan Communist Party chairman, Jotaro Kawakami, was followed by jockeying for succession between the party's moderate elements and the radical wing led by faction leader Kozo Sasaki, who was elected chairman at an extraordinary party convention in May. Sasaki attacked American "imperialism" as the "enemy of all mankind" in his acceptance speech and moved the party into a posture of vocal hostility toward the United States and militant opposition toward the Sato government. By the end of the year, the JSP had tentatively resumed cooperation with the JCP against the Korean-Japanese treaty and other Sato policies.

The Japan Communist Party continued its militant, pro-Peking policies during 1965. Despite small gains in the House of Councillors and the Tokyo Assembly elections, the party's political influence remains limited outside the radical left.

The Komeito, the political arm of the Buddhist lay organization Soka Gakkai, also made moderate gains in the House of Councillors, winning 11 seats and 13.7% of the popular vote. Its rate of gain was appreciably reduced, however, and three of its candidates were defeated, suggesting that its reputation for spectacular growth and invincibility at the polls may become increasingly difficult to maintain. (See also Religion—*Oriental Religions*.)

Legislation. The 48th regular session of the Diet reconvened on January 21. A record budget of 3658 billion yen (over $10 billion) was passed on March 31. A bill ratifying ILO Convention No. 87, which provided for freedom of association and labor's right to organize, was passed on May 17, fulfilling a seven-year-old Japanese commitment to the ILO.

UPI

JAPANESE PARLIAMENT ratified treaty with South Korea after tumultuous debate. Speaker Naka Funada (center) announces its formal passage in House of Representatives on November 12.

The session, which was marked by frequent clashes between the LDP and the increasingly recalcitrant JSP, ended June 1, following a revision of the Local Autonomy Law to permit the dissolution of local assemblies. The 49th special session was convened on July 22 to provide for the supplementary budget; and the 50th special session, called on October 4, ratified the Korean-Japanese treaty in November.

Economy. Restrictive monetary measures that were applied early in 1964 to improve Japan's deteriorating balance-of-payments position were lifted in December 1964. The removal of these restraints was not sufficient, however, to overcome the sluggish and generally pessimistic atmosphere their adoption had induced in domestic business and investment circles. The economy failed to regain the forward momentum it had previously enjoyed, despite increasing exports, rising consumer demand, and mounting government expenditures. A 1965 economic growth rate of about 2.7% was anticipated, as against an annual average of over 10% during the preceding decade.

By the end of 1965, however, the recession mood was beginning to give way to cautious optimism. The Japanese government had initiated fiscal measures to stimulate economic activity, and both the stock market and the commodity market had turned upward. To cover an anticipated budget deficit, the government, in a radical departure from past practice, planned to issue government bonds.

Basically, the Japanese economy remains sound and resilient in long-term prospect. Foreign exchange reserves stood at about $2.1 billion at the end of 1965. Exports showed a dramatic increase of 26% over 1964, while imports rose less than 2%. Japan ranks as the world's leading shipbuilder and is third in the production of iron and steel. It ranks sixth in the production of automobiles, and second only to the United States in the production of trucks. In September a Yokohama shipyard launched the world's largest tanker, the 150,000-deadweight-ton *Tokyo Maru*.

Other Events. On November 30 a second son, Aya, was born to Crown Prince Akihito and Crown Princess Michiko. He will be third in line to the throne, after his father and his elder brother Hiro.

On June 1 a gas explosion in the Yamano coal mine, 20 miles east of Fukuoka on the island of Honshu, cost the lives of 239 men. The disaster led to an investigation of the adequacy of safety measures in other mines.

The Japan National Railways claimed a world speed record on its 322-mile Tokaido line from Tokyo to Osaka. Service on the line was begun in October 1964, and the speed of the trains was increased as the tracks settled, until it was announced in November 1965 that special trains, limited to passenger service, would break all existing speed records by making the run between Tokyo and Osaka at an average speed of 103 miles an hour, attaining a maximum speed of 126 miles an hour.

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JAWARA, David K. See biographical sketch under GAMBIA.

JAZZ. See RECORDINGS.

JEHOVAH'S WITNESSES

This society of Christian ministers was active in 1965 in 197 lands, operating 23,483 congregations under the direction of 92 branches. Over 171 million hours were spent in house-to-house preaching, with more than 59 million return visits to interested persons, and in conducting over 770,000 home Bible studies each week. During the year, 64,393 new members were baptized, increasing the membership to 1,109,806.

A series of "Word of Truth" assemblies was held in Dublin, Ireland, and Edinburgh, Scotland, from June 9 to 13, on the theme that the Holy Bible contains the answers to the problems facing mankind. To emphasize this theme, the society distributed over 2½ million English and Spanish copies of the Bible textbook, *Things in Which It Is Impossible for God to Lie.* The society planned to translate the book into at least 60 languages for distribution. At 41 assemblies in Europe, North America, Hawaii, and Bermuda, 506,950 persons heard the featured talk, "World Government on the Shoulder of the Prince of Peace."

Opposition to the work of the Jehovah's Witnesses continued in eastern Europe, Spain, Portugal, and some Arab countries.

The Watchtower, the official journal of the Jehovah's Witnesses, increased its circulation to 4,600,000 in 70 languages. The companion magazine, *Awake!,* reached a circulation peak of 4,350,000 in 26 languages.

N.H. KNORR
President, Watch Tower Bible and
Tract Society of Pennsylvania

JEWISH AFFAIRS. See RELIGION—*Judaism.*

JOB CORPS. See ANTI-POVERTY PROGRAM.

WIDE WORLD

INAUGURATION of President Johnson (left) took place in Washington, D.C., on Jan. 20, 1965. Chief Justice Earl Warren administers the oath, while Mrs. Johnson and Vice President Hubert Humphrey look on.

JOHNSON, Lyndon Baines

Thirty-sixth president of the United States: b. near Stonewall, Texas, Aug. 27, 1908.

On Jan. 20, 1965, President Johnson, who had served in the office for 14 months after the assassination of John F. Kennedy, was sworn in for his first four-year term. In his inaugural address, the Texas Democrat called for a unity of purpose and "progress without strife" in a world of "rapid and fantastic change," and he promised: "I will lead and I will do the best I can."

Both success and frustration marked the year 1965 for the president. His legislative program, perhaps unequaled in its potential for social revolution, was largely approved by a cooperative Congress. But his efforts to cope with a war in Vietnam and a revolution in the Dominican Republic brought less satisfactory results. Indeed, Johnson's obligation to give increasing attention to the Vietnam crisis, which also drained off greater amounts of the country's tax monies, threatened to delay indefinitely the full implementation of the new domestic programs that he hoped would lead to a Great Society.

Dissatisfaction of many U.S. Negroes with their lot also jeopardized the president's hopes for domestic progress based on broad consensus. Johnson's vigorous efforts in behalf of the adoption and enforcement of the Voting Rights Act of 1965 removed any doubts that may have existed with respect to his commitment to secure equal rights for all Americans.

Foreign Affairs. In the face of mounting aggression by Communist insurrectionists in South Vietnam, Johnson increased the U.S. assistance to that Southeast Asian country. He repeatedly said that "We seek no wider war." In an address at Johns Hopkins University on April 7, he said that the United States was ready for "unconditional discussions" on Vietnam. But the Communists would not negotiate. The president announced on July 28 that U.S. military strength in Vietnam would increase from 75,000 to 125,000 "almost immediately," with more men to come later as needed. By year's end, approximately 180,000 U.S. troops were engaged in a brutal war against Vietcong soldiers from both North and South Vietnam.

A majority of the American people supported what Johnson described as his "carefully measured" steps in Vietnam. But the president came under a cross fire of demands from those who said that the United States had no moral right to be in Vietnam, and from those who demanded that he escalate the war.

A revolution in the Dominican Republic also tested Johnson's mettle. On April 28, four days after an uprising began against the provisional government, Johnson rushed Marine units to the island republic, explaining that he had acted to protect the lives of Americans living there. On May 2 the president revealed a second reason for the intervention: What had begun as a democratic revolution had been "taken over and really seized and placed into the hands of a band of Communist conspirators." Evidence that such was the case was sparse, and Johnson himself later hedged on that statement. Nonetheless, U.S. troop strength in the Dominican Republic eventually surpassed 20,000 before being reduced late in the year.

Johnson later called for "new international machinery" to oppose Communist subversion in the hemisphere. Asked why he had not consulted the Organization of American States (OAS) before intervening, Johnson replied that there had not been time, but he later placed U.S. forces on the island under OAS supervision. Although critics charged that Johnson had intervened on the basis of inadequate information, he may have averted a worse bloodbath leading to a Communist regime.

Johnson had hoped to meet the leaders of the Soviet Union in 1965, but U.S.-Soviet relations deteriorated as the war in Vietnam dragged on.

On April 16 the White House announced that because of "the congressional work load" and "the situation in Vietnam," scheduled visits by Pakistani President Mohammad Ayub Khan and Indian Prime Minister Lal Bahadur Shastri had been postponed. Both India and Pakistan had criticized U.S. action in Vietnam, and the postponements miffed both countries. Ayub and Johnson finally met in Washington on December 14 and 15.

British Prime Minister Harold Wilson and West German Chancellor Ludwig Erhard also visited the White House in December. Johnson pledged to support an oil embargo imposed by Britain against its rebellious colony of Rhodesia. Erhard and Johnson postponed a decision on Germany's role in the sharing of NATO's nuclear weapons, and in effect dropped an effort to form a multilateral nuclear force.

Johnson announced on September 24 that the United States and Panama had resolved their dispute with respect to the Panama Canal Zone.

Pope Paul VI and President Johnson met in New York City on October 4. They discussed world poverty, illiteracy, and disease, and pondered means by which the United States and the Roman Catholic Church could work more effectively for peace.

The Great Society. On Jan. 4, 1965, in a State of the Union speech that was exalted in tone and of seminal importance, Johnson proposed legislation that he believed would point the way to a Great Society. He said: "The Great Society asks not how much, but how good; not only how to create wealth but how to use it; not how fast we are going, but where we are headed. It proposes as the first test for a nation: the quality of its people." He said that the dreams of the people would be his guide: "A president does not shape a new and personal vision of America. He collects it from the scattered hopes of the American past."

Relying alternately on persuasion and pressure, and drawing sustenance from wide public support, Johnson pushed almost all of his "must" legislation through the heavily Democratic Congress. Education bills provided scholarships for college undergraduates, fellowships for elementary and high school teachers, grants to states for the purchase of books and other library materials, and funds for school districts in which a large number of residents were on relief. Congress approved $1.1 billion for economic development of Appalachia, and more than doubled the funds for the anti-poverty program.

Johnson won approval for medical care under the Social Security system for most persons 65 years old and over. Congress also granted Johnson a cabinet-level Department of Housing and Urban Development. The president overrode traditional congressional reluctance to patronize the arts, and secured a bill granting scholarships in the humanities and financial aid to the visual and performing arts. Johnson's new immigration law eliminated the national origins quota system. His highway beautification program will cut federal highway funds to states that fail to control junkyards and billboards along interstate and primary highways outside specified areas.

Civil Rights. After Negro demands for voting rights had led to violence in Selma, Ala., an angered President Johnson, addressing Congress on March 15, placed his own prestige and the weight of his office behind a bill to guarantee the right to vote for all citizens. He said that the Negro's heroic struggle for equal rights had "awakened the conscience of this nation." He declared: "Their cause must be our cause, too. Because it is not just Negroes but really it is all of us who must overcome the crippling legacy of bigotry and injustice. And we shall overcome!"

Congress responded by authorizing federal voting examiners to register Negroes in areas where voter participation had dropped below specified levels. Johnson signed the law on August 6, and quickly took steps to enforce it.

The president rebuked both white and Negro extremists in 1965. When members of the Ku Klux Klan were arrested in a slaying in Alabama, Johnson called the Klan a "hooded society of bigots." After Negro rioting in Los Angeles claimed 34 lives in August, Johnson asserted that "violent, willful disregard of law" must not be used to redress unjust conditions.

The Economy. The president was a proud but nervous guardian of the continuing economic boom. His heroic efforts to cut the budget and his enunciation of familiar economic homilies helped woo businessmen. Congress granted his request for a $4.7 billion cut in excise taxes over 3½ years. Johnson exhorted labor and management to avoid inflationary increases in wages and prices. He intervened in September to secure a contract settlement between the United Steelworkers Union and the steel industry. In November he ordered the release of government stockpiles of aluminum and copper to avert price increases in those industries. To redress a balance of payments deficit, the president asked businessmen and bankers to cut their lending and investing abroad, and he urged tourists to see America first. His "easy money" policies were endangered when the Federal Reserve Board increased the discount rate from 4 to 4½% on December 5, as a precautionary measure against inflation.

Health. On Oct. 8, 1965, Johnson underwent a successful operation for the removal of his gallbladder and a kidney stone. From January 23 to 26, he was hospitalized with a cold aggravated by a bronchial condition. He and Vice President Humphrey made a written agreement in 1965 to transfer executive powers should the president be disabled. (See also PRESIDENTIAL SUCCESSION.)

Background. Johnson graduated from Southwest Texas State Teachers College in 1930 and taught school for two years. He was director in Texas of the National Youth Administration from 1935 to 1937, when he was elected to Congress. He served in the Navy in 1941 and 1942. Elected to the Senate in 1948, Johnson became Senate Democratic leader in 1953, and supported measures dealing with national defense, space exploration, and civil rights. He suffered a serious heart attack in 1955. Elected vice president in 1960, Johnson succeeded to the presidency Nov. 22, 1963, on the assassination of John F. Kennedy.

(See also FOREIGN POLICY, U.S.; UNITED STATES.)

DONALD YOUNG
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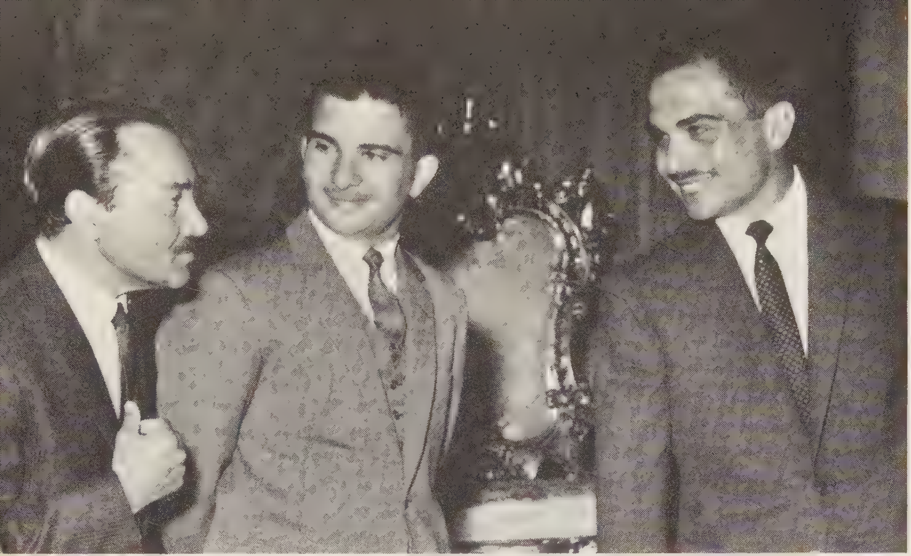
JONAS, Franz. See biographical sketch under AUSTRIA.

GALLBLADDER OPERATION forced president to curtail his activities. On October 9, the day after operation, he confers in the hospital with an assistant, Jake Jacobson.

UPI



JORDAN'S RULER, King Hussein (r.), talks with his brother, Prince Hassan (center), and his uncle, Prince Naef. Hassan was named heir to the throne in April.

KEYSTONE

JORDAN

Tension between Jordan and Israel increased in 1965. The most serious border raids and counterraids since 1956 threatened to explode in open, large-scale hostilities, but a precarious peace was maintained. The government of Wasfi al-Tal, who succeeded Bahjat al-Talhouni as prime minister in February, sought to continue Jordan's recently cemented good relations with the United Arab Republic and to implement the national development program, the goal of which is to achieve an economically self-supporting nation by 1970. On April 1, King Hussein changed the line of succession to the throne by naming his 18-year-old brother, Prince Hassan, as his heir.

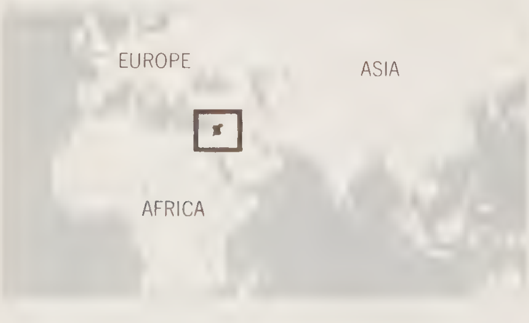
Jordan River Diversion. Throughout 1965 the Jordanian government collaborated in the Arab League plan to divert the waters of the Jordan River away from Israel. Preliminary work continued at the site of the Makhiba Dam on the Yarmuk River, where construction had begun in 1964. On March 14, Jordan received from the other Arab states commitments of 11 million Jordanian dinars for constructing the dam and raising the banks of the East Ghor Canal. On September 2 an Egyptian firm was awarded a contract to build the dam.

While work on the water diversion scheme moved ahead, attempts to create an effective unified Arab military command that would be capable of operating against Israel lagged. A majority of the Arab states, including Jordan, sought to avoid an armed confrontation with Israel until they possessed a clear military superiority.

Border Raids. Early in 1965, Al Fatah, an organization of Palestine Arabs which disagrees with the cautious policies of the Arab governments and advocates more violent action against Israel, began a campaign of hit-and-run raids into Israel. Many of these originated in or moved through Jordan. Israel complained that the Jordanian government had not taken sufficiently vigorous action against the infiltrators, and, on the night of May 27, carried out a "warning raid" against the Jordanian towns of Shuneh, Jenin, and Qalqiliya. Arab forays continued, and Israel launched a second warning raid against Qalqiliya on the night of September 5. Thereafter border clashes continued intermittently, aggravating the strained relations between the two countries.

Proposals for Arab-Israeli Negotiations. In the spring, President Habib Bourguiba of Tunisia proposed negotiations between Israel and the neighboring Arab states to transform the 1949 armistice agreements into a peace settlement. His suggestions were rejected by the Arab League, the Arab refugees' Palestine Liberation Organization, and the Jordanian

JORDAN · Information Highlights



Area: 37,737 square miles.
Population: 1,935,440 (Dec. 31, 1964, est.).
Chief Cities (1961 census): Amman, the capital, 246,475; Ez Zarqa, 96,080; Jerusalem (old city), 60,488; Nablus, 45,768; Irbid, 44,685.
Government: *King*—Hussein; *prime minister*—Wasfi al-Tal (took office Feb. 13, 1965). *Parliament*—Council of Representatives, 60 members; Council of Notables, 40 members.
Religious Faiths: Muslims, 94% of population; Roman Catholics, 3%; others, 3%.
Education: *Literacy rate* (1961)—32% of population aged 15 and over. *Total school enrollment* (1962)—313,403 (primary, 237,425; secondary, 72,005; teacher-training, 150; technical, 2,478; higher, 1,345).
Finance (1965 est.): *Revenues*, $51,968,000,000; *expenditures*, $133,134,000,000; *monetary unit*, dinar (0.3571 dinar equals U.S.$1).
Gross National Product (1963): $378,728,000.
Manufacturing (metric tons, 1963): Cement (1964), 308,000; wheat flour, 98,000; gasoline, 46,000; olive oil (1964), 20,000; tobacco, 43; beer, 8,400 hectoliters.
Crops (metric tons, 1963): Tomatoes, 215,000; wheat, 76,000; olives, 39,000; figs, 18,900; lentils, 4,000.
Minerals (metric tons): Phosphate rock (1964), 378,000; salt (1964), 20,000; gypsum (1963), 8,700.
Foreign Trade (1964): *Exports*, $24,000,000 (chief exports, 1963: crude fertilizers, $4,074,000; tomatoes, $3,186,000; watermelons, $1,187,000; olive oil, $952,000); *imports*, $141,000,000 (chief imports, 1963: iron and steel products, $9,943,000; refined sugar, $8,714,000; mechanical equipment and apparatus, $7,272,000). *Chief trading partners* (1963): Syria (took 17% of exports, supplied 10% of imports); Lebanon (took 19% of exports); U.S. (supplied 14% of imports).
Transportation: *Roads* (1964), 3,479 miles (1,522 paved); *motor vehicles* (1964), 16,919 (automobiles, 11,887); *railways* (1963), 227 miles; *national airline*, Jordan Airways; *principal airports*, Amman, Jerusalem.
Communications: *Telephones* (1964): 25,000; *radios* (1962), 63,000; *newspapers* (1962), 8.

government. When, on May 17, Prime Minister Levi Eshkol of Israel issued a plea for direct peace negotiations, a Jordanian government spokesman replied: "We reject in form and substance the proposals put forward by the prime minister of the occupation authority in Palestine, because our firm policy rejects the Zionist presence itself in Palestine."

The third Arab summit conference, which was held at Casablanca, Morocco, on September 13–17, was attended by King Hussein, although it was boycotted by President Bourguiba. It reiterated the solidarity of the Arab League states on the Palestine issue.

New Prime Minister. On February 13, Bahjat al-Talhouni resigned, pleading ill health. He was replaced by Wasfi al-Tal, who had served as premier between January 1962 and March 1963. Although al-Tal had been known as an opponent of Nasserite pan-Arabism, King Hussein instructed the new government to cooperate with the Arab states and to support the Arab League. On March 15 the cabinet received a vote of confidence of 46 to 5 (with 6 abstentions) in the Council of Representatives.

New Crown Prince. To assure a purely Arab succession, King Hussein on April 1 nominated his 18-year-old brother, Prince Hassan, as heir to the throne. He passed over his two infant sons by his English wife—Prince Abdullah, aged 3, and Prince Faisal, aged 18 months—as well as his 22-year-old brother, Prince Mohammed. Parliament unanimously amended the constitution to validate this change in the line of succession.

Foreign Affairs. Despite its improved relations with the nonaligned United Arab Republic, Jordan maintained its essentially Western orientation. For fiscal year 1965–66 the United States continued to support the Jordanian budget with a grant of $32 million, and to provide both economic and technical aid and development loans to bolster the Jordanian economy. Britain provided a grant of £1.4 million and a substantial development loan. Although Jordan broke diplomatic relations with West Germany on May 13 in protest over Bonn's exchange of ambassadors with Israel, economic and commercial relations with Germany were maintained.

Economic Developments. The government's development budget for 1965–66 called for expenditures of 22.6 million Jordanian dinars, of which 4.3 million represent Jordan's contribution to the diversion of the Jordan River waters. Work began on the long-planned reconstruction of the Hejaz Railway from Ma'an in Jordan to Medina in Saudi Arabia, a joint project of Syria, Jordan, and Saudi Arabia. Negotiations were undertaken with the American-controlled Trans-Arabian Pipeline Company for the company's construction of a motor road along its pipeline. The road, to connect with a similar highway in Saudi Arabia and a motor road to Kuwait, will give Jordan direct highway access to the Persian Gulf. On Jan. 1, 1965, Jordan, together with Syria, the United Arab Republic, Iraq, and Kuwait, became a charter member of the Arab Common Market, which provides for a gradual reduction in tariffs among the member states. (See also ASIA.)

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JOURNALISM. See MAGAZINES; NEWSPAPERS.
JUDAISM. See RELIGION—*Judaism.*
JUVENILE DELINQUENCY. See CHILD WELFARE; CRIME.

KANSAS

An unusually productive session of the Kansas Legislature put heavy emphasis on education in 1965. The federal government selected Kansas State University, at Manhattan, as the site for its new Grain Marketing Research Laboratory, and designated old Fort Scott in Bourbon County as a national historic monument.

Legislation. The legislature approved a state budget of about $510 million for fiscal year 1966. Of this amount, 38% was allocated for aid to the state colleges and local schools. The legislature also laid the groundwork for development of a statewide system of junior colleges.

Other significant legislation established family planning centers, approved a long-range state water plan, broadened the fair employment and public accommodations law, provided a uniform commercial code, created a state arts commission, provided for regional public library systems, and established a joint council on recreation.

To pay for these expanded programs, the legislature increased the cigarette tax 2 cents per pack (to 8 cents), and the sales tax by 0.5% (to 3%). It also approved a 1% increase in each bracket of the state income tax.

The legislature redrew the Kansas congressional district boundaries in 1965. Reapportionment of the state House of Representatives, ordered by the state Supreme Court, was slated for a special session of the legislature which Gov. William Avery was expected to call early in 1966. Late in December a three-judge federal court ruled that the Kansas Senate must also be reapportioned.

Grain Marketing Research Laboratory. A new U.S. Grain Marketing Research Laboratory will be built at Kansas State University, in Manhattan. The $3.3 million facility is Kansas' first major federal research activity. The project is for the study of agricultural policy and production, processing, and distribution of food.

"Miss America." Deborah Bryant, a 19-year-old beauty from Overland Park, won the "Miss America" title in Atlantic City on September 11. She plans to use her $10,000 prize scholarship to study pediatrics at Kansas University.

KANSAS BEAUTY Deborah Bryant (r.) learns of her selection as Miss America for 1965 at Atlantic City on September 12, over runner-up Patricia Puckett of Mississippi.

UPI PHOTO

KANSAS · Information Highlights

Area: 82,264 square miles.
Population: 2,197,815 (Jan. 1, 1965, est.).
Chief Cities (1965 est.): Topeka, the capital (125,363); Wichita (267,949); Kansas City (123,449); Overland Park (56,395); Hutchinson (38,747); Salina (38,706); Prairie Village (29,738); Lawrence (27,028).
Government: *Chief Officers*—governor, William H. Avery (Republican); lt. gov., John Crutcher (R); secy. of state, Paul R. Shanahan (R); atty. gen., Robert C. Londerholm (R); treas., Walter H. Peery; supt. of pub. instr., Adel F. Throckmorton; chief justice, Jay S. Parker. *Legislature*—(convened Jan. 12, 1965); Senate, 40 members (27 Republicans, 13 Democrats); House of Representatives, 125 members (81 R, 44 D).
Education: *School enrollment* (1964–65)—public elementary, 396,000 pupils (12,869 teachers); public secondary, 146,000 pupils (10,247 teachers); nonpublic schools, 58,900 pupils (1,900 teachers); college and university (fall 1964), 72,488 students. *Public school expenditures* (1964–65)—$218,000,000 ($462 per pupil); average teacher's salary, $5,587.
Public Finance (fiscal year 1965): *Revenues,* $455,557,347 (3% sales tax, $90,367,225; motor fuel tax, $47,453,774; federal funds, $115,949,295). *Expenditures,* $432,380,805 (education, $157,629,199; health, welfare, and safety, $113,256,602; highways, $128,452,832). *State debt,* $18,844,000 (fiscal year 1964).
Personal Income (1964): $5,219,000,000; average annual income per person, $2,346.
Public Assistance (fiscal year 1965): $57,649,871 to 80,000 recipients (aged, $24,334,146; dependent children, $17,015,485).
Labor Force (employed persons, June 15, 1965): *Agricultural,* 142,100; *nonagricultural* (wage and salary earners), 686,800 (17% manufacturing, 20% trade, 18% government). *Unemployed persons* (June 15, 1965)—28,100.
Manufacturing (1963): Value added by manufacture, $1,436,874,000 (transportation equipment, $433,130,000; primary metals, $17,109,000; nonelectrical machinery, $92,400,000; electrical machinery, $24,076,000; fabricated metals, $63,582,000; food and products, $238,511,000).
Agriculture (1964): *Cash farm income,* $1,382,866,000 (livestock, $743,707,000; crops, $450,396,000; govt. payments, $188,763,000). *Chief crops* (tons)—wheat, 6,464,000 (ranks 1st among the states); hay, 4,288,000 (rank, 9th); alfalfa, 2,891,000 (rank, 9th); sorghum grain, 2,750,000 (rank, 2nd); corn for grain, 1,297,000 (rank, 17th); sugar beets, 365,000 (rank, 15th); barley, 244,000 (rank, 11th).
Mining (1964): *Production value,* $513,269,000 (ranks 11th among the states). *Chief minerals* (tons)—salt, 930,000 (rank, 8th); lead, 1,185 (rank, 14th); crude petroleum, 106,252,000 barrels (rank, 7th); natural gas, 768,246,000,000 cubic feet (rank, 5th); bituminous coal, 1,263,000; zinc, 4,665.
Transportation: *Roads* (1964), 132,627 miles (88,625 paved); *motor vehicles* (1964), 1,336,148; *railroads* (1965), 12,056 miles; *airports* (1965), 219.
Communications (1965): *Telephones,* 1,010,000; *television stations,* 11; *radio stations,* 76; *newspapers,* 53 (daily circulation, 669,498).

Historic Sites. Fort Scott, the army post established on the Indian frontier in 1842, was designated a national historic monument in a bill signed by President Johnson on Aug. 31, 1965. The fort was prominent in Missouri-Kansas border troubles of the late 1850's, and a center of activities in the southeast Kansas region during the Civil War. Several buildings of the fort are still standing in the heart of the city of Fort Scott.

Congress also provided for additional marking of four other historic sites in Kansas—the traditional home of John Brown in Osawatomie; the Marais des Cygnes Massacre site in Linn County; and two Civil War battlefields—Baxter Springs in Cherokee County, and Mine Creek in Linn County, south of Pleasanton.

Crop Production. The 1965 Kansas crop season was the fourth best on record. Hay and soybean crops were the largest ever recorded in Kansas, and the sugar beet crop was the second largest on record. Other high yields were registered by wheat (243 million bushels), and sorghum grain (136 million bushels).

Nyle H. Miller
Secretary, Kansas State Historical Society

KASHMIR. See Asia; India; Pakistan.

KATZENBACH, Nicholas deB. See biographical sketch under United States.

KENTUCKY

A conflict in 1965 over Kentucky's tax policy had far-reaching effects on the state's Democratic party. The state court of appeals ruled that under present laws property assessments must be made on the basis of 100% property valuation. The court's decision necessitated new legislation to fix the state's real property taxation policy. At a special session of the General Assembly in August called by Gov. Edward T. Breathitt, Jr., an open break in the state Democratic party occurred between the forces of the governor and those of Lt. Gov. Harry Lee Waterfield. The forces aligned with the governor favored the policy laid down by the court of appeals, but they also proposed possible adjustments in tax rates and assessments; those backing Waterfield favored new legislation that would carry out the mandate of the court and that would not allow liberal adjustments in assessments and levies. The governor's forces prevailed, and the way was left open for a legislative adjustment of property taxes basically in line with the policy in effect prior to the court's decision.

Elections. In the state elections in November, voters returned a Democratic majority to the General Assembly. Republicans elected a county judge and a mayor in Jefferson County and in Louisville, and a county judge in Fayette County.

KENTUCKY · Information Highlights

Area: 40,395 square miles.
Population: 3,138,000 (1965 est.).
Chief Cities (1965 est.): Frankfort, the capital (20,800); Louisville (392,000); Lexington (79,000); Covington (57,000); Owensboro (45,800); Paducah (34,000); Bowling Green (32,800); Ashland (31,000).
Government: *Chief Officers*—governor, Edward T. Breathitt, Jr. (Democrat); lt. gov., Harry Lee Waterfield (D); secy. of state, Mrs. Thelma L. Stovall (D); atty. gen., Robert F. Matthews, Jr. (D); treas., Emerson Beauchamp; supt. of pub. instr., Harry M. Sparks; chief justice, John R. Moremen. *Legislature*—General Assembly (convened Jan. 4, 1966); Senate, 38 members (26 Democrats, 12 Republicans); House of Representatives, 100 members (64 D, 36 R).
Education: *School enrollment* (1964–65)—public elementary, 461,500 pupils (16,000 teachers); public secondary, 228,000 pupils (9,500 teachers); nonpublic schools, 100,500 pupils (3,170 teachers); college and university (fall 1964), 65,643 students. *Public school expenditures* (1964–65)—$200,000,000 ($323 per pupil); teacher's average salary, $4,750.
Public Finance (fiscal year 1964): *Revenues,* $639,239,000 (3% sales tax, $109,455,000; motor fuel tax, $72,993,000; federal funds, $182,748,000). *Expenditures,* $687,107,000 (education, $215,311,000; health, welfare, and safety, $100,632,000; highways, $212,038,000). *State debt,* $179,060,000.
Personal Income (1964): $5,781,000,000; average annual income per person, $1,830.
Public Assistance (fiscal year 1965): $89,751,339 to 175,198 recipients (aged, $42,921,181; dependent children, $24,283,632).
Labor Force (employed persons, July 1965): *Agricultural,* 148,600; *nonagricultural* (wage and salary earners), 916,400 (21.9% manufacturing, 17.5% trade, 14.4% government). *Unemployed persons* (July 1965)—37,700.
Manufacturing (1963): Value added by manufacture, $2,460,058,000 (transportation equipment, $206,893,000; primary metals, $132,114,000; nonelectrical machinery, $229,562,000; electrical machinery, $351,803,000; fabricated metals, $141,734,000; food and products, $364,022,000).
Agriculture (1964): *Cash farm income,* $777,882,000 (livestock, $323,914,000; crops, $419,799,000; govt. payments, $34,169,000). *Chief crops* (tons)—corn for grain, 1,744,000 (ranks 13th among the states); tobacco, 232,000 (rank, 2nd); popcorn, 14,800 (rank, 6th); peaches, 8,400 (rank, 19th); sweet potatoes, 4,600 (rank, 15th); hay, 2,283,000; wheat, 154,000; barley, 29,400; oats, 26,800; potatoes, 22,800; apples, 12,000; sorghum grain, 5,900; rye, 4,600.
Mining (1964): *Production value,* $444,379,000 (ranks 15th among the states). *Chief minerals* (tons)—coal, 82,747,000 (rank, 3rd); fluorspar, 38,214 (rank, 2nd); lead, 858 (rank, 15th); natural gas, 77,360,000,000 cubic feet (rank, 13th); petroleum, 19,772,000 barrels (rank, 15th).
Transportation: *Roads* (1965): 69,330 miles (26,312 paved); *motor vehicles* (1964), 1,412,210; *railroads* (1964), 2,907.45 miles; *airlines* (1965), 8 (19 airports in 1964).
Communications (1965): *Telephones,* 1,013,000; *television stations,* 7; *radio stations,* 93; *daily newspapers,* 22 (circulation, 232,115); *other newspapers,* 141 (circulation, 370,087).

KENYA'S PRESIDENT Jomo Kenyatta (right) is greeted by Senate Speaker Michael Chekwe at the ceremonial opening of the new Parliament buildings in Nairobi on Nov. 2, 1965. At left is Humphrey Slade, speaker of the House of Representatives.

WIDE WORLD

The voters approved a $175 million bond issue, which will enable Kentucky to complete its interstate highway system and to improve conditions in the state's public institutions.

Protest Against Strip Coal Mining. In June a delegation of eastern Kentucky mountaineers staged a motorcade to the capital to protest the expansion of strip coal mining on their impoverished land. Governor Breathitt later went in person to the spoil dumps in the Cumberland Mountains area to survey the damage. He promised support of new legislation to prevent further destruction of the land.

New Highway. On October 28, Governor Breathitt opened the Central Kentucky Parkway, a toll road between Elizabethtown and Versailles that connects the Western and Eastern parkways. The new toll road reduces traveling time between the eastern and western sections of the state from 8 to 10 hours.

Appalachia. The economically depressed Appalachian counties constitute a major problem for Kentucky. The problem is one of social as well as economic significance. Migration from the Appalachian counties, which continued in 1965, caused a lack both of leadership talent and of a source of labor in the area. The federal government's new anti-poverty program has had little visible effect in the area thus far. (See ANTI-POVERTY PROGRAM.)

Industry. The central and western sections of Kentucky, as well as certain portions of the eastern section, made progress during the year in industrial expansion. The progress was in line with Governor Breathitt's aims, which he outlined in his campaign for the governorship in 1963. Each year, more of the state's income comes from the industrial and service sectors of the economy, and less is derived from the agricultural sector.

Education. In 1965 the University of Kentucky celebrated the hundredth anniversary of its founding. The centennial festivities opened with an address by President Lyndon B. Johnson on February 22.

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KENYA

Kenya entered 1965 as a new republic, having ended its status as a British dominion on Dec. 12, 1964, the first anniversary of its independence. President Jomo Kenyatta attempted to guide the country toward the peace and prosperity envisioned in his goal of "African socialism," but Kenya experienced internal dissension and strained relations with the Soviet Union and neighboring East African nations.

Mau Mau Amnesty. The most immediate problem the government faced was to resettle Mau Mau terrorists who remained in the forest, defying the government. Over 200 Mau Mau surrendered, but upon the termination of the two-month amnesty on January 12, government troops marched against the recalcitrant Mau Mau and killed their leader, the self-styled Field Marshal Baimungi.

Labor Unrest. In early March, Kenya was paralyzed for three days by a strike of 16,000 railway workers, who demanded an increase in the minimum wage and the dismissal of African and white officials with "colonial mentality." A sympathy strike by

KENYA · Information Highlights

ASIA
AFRICA
S. AMERICA

Area: 224,960 square miles.
Population: 9,365,000 (July 1, 1965 est.).
Chief Cities (1962 census): Nairobi, the capital, 266,794; Mombasa, 179,575; Nakuru, 38,181; Kisumu, 23,526.
Government: *President*—Jomo Kenyatta; *Vice President*—Oginga Odinga; *Parliament*—House of Representatives, 129 members; Senate, 41 members.
Religious Faiths: Protestants, 47% of population; Roman Catholics, 11%; Muslims, 4%; others and unknown, 38%.
Education: *Literacy rate*—less than 50% of population. *Total school enrollment* (1962)—967,519 (primary, 935,766; secondary, 25,884; teacher-training, 3,953; technical, for Africans, 1,443; higher, 473).
Finance (1964 est.): *Revenues*, $123,203,000; *expenditures*, $170,436,000; *net public debt*, $196,274,000; *monetary unit*, East African shilling (7.143 shillings equal U.S.$1).
Gross Domestic Product (1964): $778,400,000.
Economic Indexes: *Manufacturing* (1963), 128 (1958=100); *cost of living* (1964): Africans, 107 (1958=100).
Manufacturing (metric tons, 1963): Cement (1964), 336,000; wheat flour, 72,000; sugar (1964), 39,000; beef (1962), 30,000; tobacco, 225; beer, 440,000 hectoliters.
Crops (metric tons, 1964–65 crop year): Tea, 20,200 (ranks 7th among world producers); wheat, 136,000; maize (1963–64), 81,000; sisal (1963), 68,000; coffee, 45,000.
Minerals (metric tons, 1964): Salt, 40,000; kaolin, 1,284; lime, 3,600; diatomite, 3,300; pumice, 1,438.
Foreign Trade (1964): *Exports*, $150,000,000 (chief exports: coffee, $43,120,000; sisal, $17,360,000; tea, $17,080,000); *imports*, $214,000,000 (chief imports, 1963: petroleum products, $19,706,000; motor vehicles, $19,662,000; iron and steel, $13,384,000). *Chief trading partners* (1963): Britain (took 25% of exports, supplied 31% of imports); West Germany (16% of exports, 6% of imports).
Transportation: *Roads* (1964), 26,051 miles (1,112 paved); *motor vehicles* (1964), 75,199 (automobiles, 65,511).
Communications: *Telephones* (1964): 47,706; *television stations* (1964), 2; *television sets* (1964), 8,500; *radios* (1963), 100-000; *newspapers* (1963), 5 (daily circulation, 81,000).

government workers followed, and another general strike was averted only by the intervention of Tom Mboya, the minister of economic planning, who persuaded the strikers to submit their claims to an industrial court. Labor unrest continued, however, and on March 24–25, rioting erupted at Kisumu following a two-week strike by engineering workers.

President Kenyatta repeatedly criticized the labor movement, suggesting a merger of all the unions. On June 23 he banned public meetings and demonstrations by the two large labor federations and announced the formation of a government labor policy committee.

Foreign Policy. A controversy arose in Parliament over the interpretation of Kenya's nonalignment policy. In April, some legislators charged that Communist nations were attempting to sneak arms into Kenya. Although the allegations were denied by Njoroge Mungai, the minister of defense, a shipment of Soviet arms was subsequently rejected as obsolete. Relations with the Soviet Union were further strained when 29 Kenya students returned from Soviet schools complaining of discrimination, low standards of teaching, and brainwashing. Moreover, the Kenya Ministry of Education took over the direction of the Russian-sponsored Lumumba Institute in Nairobi, charging that it had become an instrument in the cold war.

In a speech on June 1, President Kenyatta rejected communism as "somebody else's nationalism." Reasserting Kenya's policy of nonalignment, he went on to say, "Kenya shall not exchange one master for a new master. . . . Let every nation in the East or West take heed of this warning."

Tanzania and Uganda, Kenya's neighbors in East Africa, both appeared to be increasingly influenced by Communist China in 1965, and their relations with Kenya reached a low ebb. On May 15, Kenya security forces intercepted a convoy of Chinese arms passing without authorization through Kenya from Tanzania to Uganda, and Prime Minister Obote of Uganda had to fly to Nairobi to explain the incident and obtain release of the weapons.

Politics. Although Kenyatta's popularity was undiminished, his rejection of Russian and Chinese communism brought charges that the state party, the Kenya African National Union (KANU), favored the West. Opposition parties had merged with KANU late in 1964, but, on June 25, 1965, Lucas Oguok announced the formation of a new Kenya Socialist Party aimed at "revolutionizing KANU."

The Economy. In 1964, Kenya's exports outside East Africa had increased 8% over the 1963 level, with coffee making the greatest gain. However, agricultural production, already in decline since the redistribution of land in small plots in the Kenya Highlands, decreased further under drought conditions in 1965. Food shortages resulted, and some importation of grain was necessary.

During the year, Kenya received pledges of aid from Britain and West Germany, amounting to about $85 million, and the United States was considering a grant of $36 million. With these prospects, Tom Mboya anticipated that Kenya could achieve an annual rate of economic growth of 5.2%.

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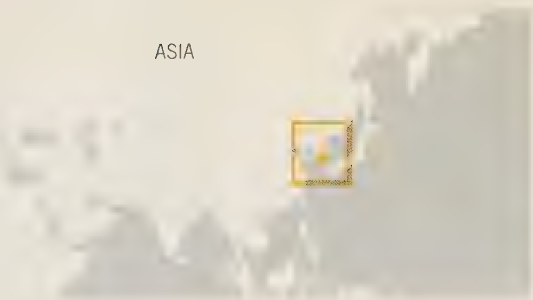
KING, Martin Luther, Jr. See biographical sketch under CIVIL RIGHTS.

KOREA



The United States and the Soviet Union divided the homogeneous Korean nation along the 38th parallel in 1945, after the Japanese surrender brought an end to World War II. Since then, the Republic of Korea in the south has been associated with the West, and the Democratic People's Republic of Korea in the north has been ruled by Communists. The Korean War (1950–53) prevented a takeover of South Korea by North Korea, but kept the boundary dividing the two countries along the 38th parallel.

SOUTH KOREA

During 1965, the government of President Chung Hee Park sought to ease its financial difficulties by settling long-term Korean claims against Japan on the best possible terms. A Treaty on Basic Relations was signed by the South Korean and Japanese for-

SOUTH KOREA · Information Highlights

Area: 38,004 square miles.
Population: 28,353,000 (June 30, 1965 est.).
Chief Cities (1962 est.): Seoul, the capital, 2,983,324; Pusan, 1,270,625; Taegu, 716,584; Inchon, 430,054.
Government: *President*—Maj. Gen. Chung Hee Park (took office Dec. 17, 1963); *Premier*—Chung Il Kwon (appointed May 9, 1964). *Parliament*—National Assembly, 175 members; party seating (1965): Democratic Republican, 110; Civil Rule, 41; Democratic, 13; others, 11.
Religious Faiths: Animism, Buddhism, Confucianism, and Christianity.
Education: *Literacy rate* (1960)—71% of population aged 15 and over. *Total school enrollment* (1962)—5,222,065 (primary, 4,089,152; secondary, 854,549; teacher-training, 2,714; technical, 140,914; higher, 134,736).
Finance (1964 est.): *Revenues,* $211,800,000; *expenditures,* $297,600,000; *monetary unit,* won (255 won equal U.S.$1).
Gross National Product (1964): $2,100,000,000.
National Income (1964): $1,850,000,000; average annual income per person, $67.
Economic Indexes (1964): *Industrial production,* 189 (1958=100); *agricultural production,* 132 (1956–57=100); *cost of living,* 201 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,242,000; wheat flour, 270,000; crude steel, 129,600; meat (1961), 66,000; cotton yarn, 64,920; tobacco (1963), 9,773.
Crops (metric tons, 1963): Rice (1964), 3,980,000 (ranks 11th among world producers); sweet potatoes and yams, 787,000; potatoes, 293,000; barley, 242,000; wheat, 163,000; soy beans, 156,000; tobacco (1964), 39,600.
Minerals (metric tons, 1964): Anthracite coal, 9,621,000 (ranks 7th among world producers); graphite, 177,000 (rank, 1st); diatomite, 39,400 (rank, 6th); tungsten ore, 6,000 (rank, 4th); iron ore, 685,000; salt, 386,000; silver, 404,456 troy ounces.
Foreign Trade (1964): *Exports,* $119,100,000 (chief exports, 1963: iron and steel plates and sheets, $8,290,000; veneer sheets and plywood, $6,313,000; iron ore and concentrates, $5,912,000; raw silk, $4,662,000); *imports,* $404,400,000 (chief imports, 1963: wheat and meslin, unmilled, $66,475,000; non-electrical machinery, $61,942,000; fertilizers, $47,967,000). *Chief trading partners* (1963): U.S. (took 28% of exports, supplied 51% of imports); Japan (took 29% of exports, supplied 28% of imports); South Vietnam (took 14% of exports, supplied 0.2% of imports).
Transportation: *Roads* (1964), 17,434 miles (897 paved); *motor vehicles* (1964), 35,127 (automobiles, 13,878); *railways* (1963), 1,891 miles; *merchant vessels* (1964), 31 (113,000 gross registered tons); *airline,* Korean National Airlines; *principal airport,* Seoul.
Communications: *Telephones* (1964), 170,765; *television sets* (1963), 3,000; *radios* (1963), 1,661,000; *newspapers* (1963), 35 (daily circulation, 1,500,000).

KOREA-JAPAN TREATY established diplomatic ties between South Korea and its traditional enemy after 14 years of negotiations. Korea's Foreign Minister Lee Tong Wong (seated at left behind microphone) and Japan's Foreign Minister Etsusaburg Shiina sign the pact in Tokyo on June 22, 1965.

UPI

eign ministers in Tokyo on June 22. There was strong opposition to the treaty in South Korea, and 62 members of the opposition party, Minjung Dang, boycotted the session of the National Assembly at which it was ratified. The ruling Democratic Republican party secured its passage (110 to 0, with one abstention) on August 14. The ratification instruments were exchanged in Seoul on December 18.

The treaty establishes full diplomatic relations between Japan and South Korea for the first time since 1910. An accompanying economic agreement requires Japan to give the Park regime $300 million as a grant, $200 million in government loans, and $100 million in private loans. The question of fishing rights also was settled.

Opposition to the Treaty. Many Koreans objected to the agreement for a number of reasons. They felt humiliated because their claim for indemnity had been settled as a "grant," and because the Park government had accepted a fraction of the amount of reparations demanded by previous governments. They feared that the floodgate had been opened to Japan's reinvasion of economic fields, including fisheries. They also believed that the accord would hinder the chances for an early unification of North and South Korea.

Demonstrations by students, religious groups, political parties, social organizations, and even some retired generals and former officials preceded and followed ratification of the treaty. On August 26 the government mobilized an army division to suppress popular protest. Colleges and universities were closed, many students and professors were blacklisted, and some retired officers were accused of being "anti-government."

Even the pro-government newspaper, the *Korea Times* was provoked to comment on September 21: "It must be admitted that professors and students are also entitled to take part in activities of a political nature outside the campus in their individual capacity, because they also are regular citizens having the right to vote."

NORTH KOREA · Information Highlights

Area: 46,540 square miles.
Population: 11,800,000 (mid-1964 est.).
Capital (1960 est.): Pyongyang, 653,100.
Government: *Chairman of Presidium of the Supreme People's Assembly*—Chou Yong Kun (took office 1957); *Premier*—Marshall Kim Il Sung (took office 1948). *Parliament*—Supreme People's Assembly, 383 members.
Education: *Total school enrollment* (1963–64)—2,570,000 (university, 214,000).
Finance (1964 est.): *Revenues,* $2,862,000,000; *expenditures,* $2,862,000,000; *monetary unit,* won (1.20 won equal U.S.$1).
Manufacturing (metric tons): Cement (1964), 2,610,000; crude steel (1963), 1,220,000.
Crops (metric tons): Grains (1963), 5,000,000.
Minerals (metric tons, 1964): Anthracite coal (1963), 9,707,000 (ranks 5th among world producers); iron ore, 4,800,000 (rank, 20th); magnesite, 898,000 (rank, 4th); zinc (1963), 109,000 (rank, 9th); pyrites, 422,000; salt, 399,000; graphite, 70,000 (rank, 3rd).
Foreign Trade (1962): *Chief exports:* metals, 48.5% of total export value; farm products, 12.6%; minerals, 11.2%; *chief imports:* machines, 34.1% of total import value; fuel, 22.2%; textiles, 11.3%. *Chief trading partners:* USSR, 60%; Communist China, 3%.
Transportation: *Railways* (1964), 6,500 miles; *principal airport,* Pyongyang.
Communications: *Radios* (1961), 600,000.

Opposition to the Government. The Park regime experienced difficulties in 1965. The *Korea Times* stated on September 26: "The nation seems to have lost a sense of direction. . . . What can be seen immediately are . . . glaring signs of corruption, graft, profiteering, irregularities and abused power. . . ."

On May 10 and 11, Gen. Kyung Suk Chang and seven other officers were arrested for allegedly plotting to overthrow the government. The major opposition parties—the Democratic and Civil Rule—formally merged on June 14 under the name of Minjung Dang (Popular party) to challenge the overwhelming power of Park's Democratic Republican party.

To strengthen his position, President Park sought closer ties with the United States. He visited Washington, D.C., from May 16 to 27, and on August 13 he took advantage of the boycott of opposition members to push through Parliament his proposal to send a 15,000-man combat division to South Vietnam. Anti-American feeling rose along with antigovernment feeling in connection with the treaty signed with Japan.

Despite the government's claims of increases in the gross national product and exports, living conditions did not improve. Prices of food and other necessities rose faster than wage increases, and chronic unemployment continued unchecked. Economic unrest added to the feeling of general discontent among the South Korea people.

STUDENTS RIOT in Seoul on April 13 to protest government plans to "normalize" relations with Japan by treaty.

UPI

WIDE WORLD

SOUTH KOREA'S PRESIDENT PARK, on his May visit to Washington, D.C., enjoys the company of President Johnson and the White House pets, Blanco (foreground) and Him.

Death of Rhee. The death of exiled former President Syngman Rhee in Hawaii on July 19 ended another chapter in Korean history. Rhee was buried in South Korea on July 27. (See NECROLOGY.)

NORTH KOREA

North Korea declared the 1965 South Korean-Japanese treaty null and void, describing it as "inspired by American imperialism." During the year the government of Premier Kim Il Sung sought to improve Soviet-North Korean relations, which had shown strain in 1964, and proclaimed its support for the Communist movement in Vietnam.

Foreign Affairs. Soviet Premier Kosygin paid a four-day visit to North Korea, February 11–14, to strengthen friendship and cooperation between the two countries and to discuss the current international situation. A joint communiqué by Kim Il Sung and Kosygin reaffirmed Korean-Soviet solidarity under the treaty of friendship, cooperation, and mutual assistance signed in Moscow on July 6, 1961. The USSR pledged "full support to the struggle of the Korean people for unifying Korea peacefully by themselves on a democratic basis without outside interference after the withdrawal of the U.S. troops from South Korea."

On March 26 the Kim Il Sung regime announced its decision "to render every form of material and moral assistance, including weapons, to the fraternal Vietnamese people. . . ." On April 27, two North Korean jet fighters attacked and damaged a United States reconnaissance plane over international waters of the Sea of Japan. There was speculation in the United States that the incident was related to the war in Vietnam.

Between Dec. 14, 1959, and Sept. 25, 1965, a total of some 84,000 Koreans in Japan (most of them of South Korean origin) were repatriated to North Korea. The 1965 North Korean budget provided 800,000,000 Japanese yen for educational and relief aid for Korean nationals in Japan.

National Development. North Korea claimed that its housing problem had been solved. According to the government, urban and rural dwelling construction since the end of the Korean war amounted to about 38 million square meters of floor space, with more than 2 million square meters added in 1964 alone. In addition, the government claimed that over 9,000 schools and numerous other public buildings had been built.

YONGJEUNG KIM
President, Korean Affairs Institute

KOSYGIN, Aleksei Nikolayevich

Premier of the USSR: b. St. Petersburg, Russia (now Leningrad, USSR), Feb. 20, 1904.

Kosygin completed his first year as premier of the USSR in 1965. In domestic policy he initiated economic and administrative reforms designed to provide greater freedom of action at local or plant levels. In foreign affairs Kosygin initiated talks that he hoped would lead to settlement of the Vietnamese war and of the Indian-Pakistani conflict over Kashmir. He criticized U.S. involvement in Vietnam and called on all nations to issue a ban on intervention in the affairs of other states.

KOSYGIN (center) visits Hanoi, North Vietnam, in February 1965, to discuss Vietnamese war with North Vietnamese Premier Pham Van Dong (at his right).

SOVFOTO

Domestic Policy. In his first eight months as premier, Kosygin initiated several important economic reforms. In March he announced that the new Soviet five-year plan (1966–70) would stress production of consumer goods, particularly automobiles. In an attempt to relieve the chronic housing shortage by increasing incentives for building, Kosygin announced in April that loans to construction companies would bear the greatly reduced interest rate of 0.5%. If construction was completed ahead of schedule, the government would guarantee a reduction of 25% on the total interest for the loan.

Kosygin also announced in April a farm-recovery program that provided for large increases in the prices the government pays for produce, and that cancelled a $2 billion debt owed by collective farms to the State Bank. Kosygin announced economic reforms that would increase the autonomy of factory managers and introduce a modified profit system.

Foreign Affairs. Kosygin's most important foreign policy initiatives involved trips to Hanoi, North Vietnam, in February 1965, and to Tashkent, USSR, in January 1966. In Hanoi, Kosygin held five days of talks with North Vietnamese leaders. He agreed to provide military and economic assistance to North Vietnam.

In Tashkent, Kosygin hosted negotiations between Indian Prime Minister Lal Bahadur Shastri and Pakistani President Mohammed Ayub Khan on Indian-Pakistani problems. Kosygin presided over the discussions and held individual talks with each of the leaders when the negotiations broke down on three separate occasions. The 9-point declaration signed by Shastri and Khan on January 10 included an agreement on mutual troop withdrawal in Kashmir and was regarded as a landmark in Indian-Pakistani relations, and as a personal triumph for Kosygin's diplomacy.

Background. After graduating from a technical institute in 1924, Kosygin worked in consumer cooperatives, and later as a foreman and director of several Leningrad factories. His political career began in 1938, when he was elected mayor of Leningrad. He quickly became involved in national politics, and in 1948 was named minister of finance. In the same year, however, Kosygin fell into disfavor and did not regain a significant position until 1959, when he became chairman of the State Planning Commission (Gosplan). He became vice premier of the USSR in 1960 and premier in 1964.

KUWAIT

EUROPE
ASIA
AFRICA

Sheikh Sabah al-Salem al-Sabah was sworn in as the new amir of Kuwait on Nov. 27, 1965, at a special session of the National Assembly. The new amir succeeded his elder brother, Sheikh Abdullah al-Salem al-Sabah, who had died on November 24.

KUWAIT · Information Highlights

Area: 6,000 square miles.
Population: 468,000 (February 1965 prelim. census).
Chief City (1963 est.): Kuwait City, the capital, 250,000.
Government: *Amir*—Sheikh Sabah al-Salem al-Sabah (acceded 1965); *prime minister*—Sheikh Jaber al-Ahmad al-Jaber (took office Nov. 30, 1965). *Parliament*—National Assembly, 50 members.
Religious Faiths: Muslims, 95% of population; Christians, 5%.
Education: *Literacy rate* (1961)—47% of population aged 6 and over. *Total school enrollment* (1962)—52,643 (primary, 34,176; secondary, 17,247; teacher-training, 274; technical, 946).
Finance (1964–65 budget): *Revenues*, $574,000,000; *expenditures*, $574,000,000; *monetary unit*, dinar (0.3571 dinar equals U.S.$1).
Income Per Person (1965): $3,257.
Economic Index (1964): *Industrial (petroleum) production* (incl. Kuwait neutral zone), 161 (1958=100).
Manufacturing: Petroleum products (1963), 10,866,000 metric tons.
Minerals (1964): Crude petroleum, 906,230,000 barrels (ranks 4th among world producers).
Foreign Trade (1964): *Exports*, $1,218,000,000 (chief exports, 1963: crude petroleum, 629,158,000 barrels; refined petroleum products, 37,861,000 barrels); *imports*, $322,000,000 (chief imports, 1963: mechanical transport equipment, $29,000,000; mechanical machinery, $19,000,000; electrical equipment, $15,000,000). *Chief trading partners* (1963 petroleum exports and total imports): Britain (took 26% of exports, supplied 19% of imports); Japan (took 15% of exports, supplied 9% of imports); Italy (took 15% of exports, supplied 4% of imports); U.S. (took 7% of exports, supplied 20% of imports).
Transportation: *Roads* (1962), 500 miles (surfaced); *motor vehicles* (1963), 63,541 (automobiles, 45,167); *merchant vessels* (1964), 7 (74,000 gross registered tons); *civil airline*, Kuwait Airways Corps.; *principal airport*, Kuwait City.
Communications: *Telephones* (1964): 18,400; *television stations* (1964), 3; *television sets* (1964), 60,000; *radios* (1962), 90,000; *newspapers* (1960), 1 (daily circulation, 1,000).

On November 30 the new amir appointed Sheikh Jaber al-Ahmad al-Jaber, formerly the minister of finance and commerce, as prime minister. The prime minister, from the al-Jaber branch of the ruling family, is a leading contender for the throne, since members of the two branches have traditionally alternated as ruler.

Foreign Affairs. Both the Kuwait Fund for Arab Economic Development and the Kuwait government made loans and grants during 1965 to Morocco, Sudan, the United Arab Republic, Jordan, and Algeria. Several members of the National Assembly had protested granting funds directly from the government reserve to other Arab states.

Gifts by the Kuwait government in 1965 included a pledge of $500,000 to a special fund to help cover the United Nations operating deficit, a $50,000 grant to Columbia University in New York City for Middle Eastern studies, and $50,000 to the Kennedy Memorial Library to be built in Cambridge, Mass.

Economy. Continued increases in oil production during 1965, ensuring an increase of royalties to the state, raised Kuwait's per capita income to $3,257—the highest in the world.

The government granted a concession of a 49% interest in 3,600 square miles of onshore and offshore oil deposits to Hispanoil, a consortium of Spanish and other oil-refining companies. The territory had been given up by the Kuwait Oil Company in 1962.

In order to diversify its economy, Kuwait began in 1965 to build a $35 million petrochemical fertilizer plant in Shuaibeh, 20 miles south of Kuwait City. In addition, construction was started on the third of five proposed seawater distillation plants.

SYDNEY NETTLETON FISHER
Professor of History, The Ohio State University

KY, Nguyen Cao. See biographical sketch under VIETNAM.

DOCK WORKERS PICKET a pier in New Orleans during strike in which 60,000 members of the International Longshoremen's Association tied up shipping in Atlantic and Gulf Coast ports early in 1965. Longshoremen returned to their jobs in New Orleans in March (and in New York in February) under a 4-year contract.

UPI

LABOR

Continued economic expansion brought employment to an all-time high in 1965. The unemployment rate declined and labor shortages appeared, particularly in the skilled trades. Meanwhile, federal programs sought to develop industry in depressed areas and to provide training in marketable skills. President Johnson's legislative program continued to encourage economic growth to provide employment for the burgeoning labor force. It also sought to furnish education for unskilled workers and retraining for displaced workers.

EQUAL EMPLOYMENT OPPORTUNITY

Franklin D. Roosevelt, Jr., was named to head the five-man Equal Employment Opportunity Commission established under Title VII of the Civil Rights Act of 1964. Title VII's equal-opportunity provisions became applicable on July 1 for employers and unions with 100 or more workers or members, and for most employment agencies.

In an early ruling on job discrimination based on sex, the commission gave tentative qualified approval to continuing the practice of running "help wanted" ads under "male" or "female" headings, even if jobs can be filled by members of either sex, provided certain qualifications are stated.

COLLECTIVE BARGAINING

Job security continued to be a major focus of collective bargaining in 1965, and many unions demanded protection against the threat of replacement of workers by automated machines. Major agreements negotiated during the first nine months of the year resulted in a median increase in wage rates of 11 cents, or 4.2% (excluding fringe benefits).

Employers and unions in the construction industry revised procedures under the industry's voluntary National Joint Board for Settlement of Jurisdictional Disputes. The revisions established an appeals board and provided greater flexibility in applying criteria for decisions.

Metalworking. Bargaining in the metalworking industry centered on two aspects: attainment of "total job security," as called for at the Steelworkers 1964 convention, and the adherence of settlement terms to the government's wage-price guidelines. A steel-price study by the Council of Economic Advisers, released in May, stated that steel productivity had increased about 3% annually in recent years. This finding was disputed by the industry, which asserted that the rise was only 2%.

A Steelworkers agreement with a relatively small producer, Alan Wood Steel Co., guaranteed a 38-hour workweek and, in the case of workers with two or more years' service, earnings at least equal to 95% of average straight-time earnings in the last quarter of the preceding year. A 3-year contract with the Aluminum Company of America, providing a wage and fringe-benefit package valued at 50.1 cents an hour, gave full pensions after 30 years' service.

Negotiations in steel were complicated by the hotly contested election for the presidency of the union. On April 28 the negotiators agreed to a 4-month contract extension, with 11.5 cents per hour to be placed in escrow by each company. Two days later it was announced that I.W. Abel had been elected as the new union president, succeeding David J. McDonald. Abel took office on June 1, but at the end of the contract extension, negotiations remained deadlocked. Mediation efforts proved fruitless, and negotiations were moved to Washington. On August 30, an additional 8-day extension was obtained.

Under constant prodding by President Johnson, the negotiators came to an agreement six days later. The contract provided for an immediate pay increase ranging from 10 to 19 cents an hour, depending on job classification, and additional increases of 6 to 12 cents as of Aug. 1, 1967. The agreement spelled out improvements in vacations, medical benefits, life insurance coverage, and relocation pay, as well as changes in pension benefits. The Human Relations Committee, regarded by many as a key factor in labor stability in the industry, was discontinued.

Railroads. On February 7, most American railroads reached agreement with five nonoperating unions—Railroad Telegraphers, Railway Clerks, Maintenance of Way Employees, Railroad Signalmen, and Hotel and Restaurant Employees—on assuring permanent employment. A large majority of the

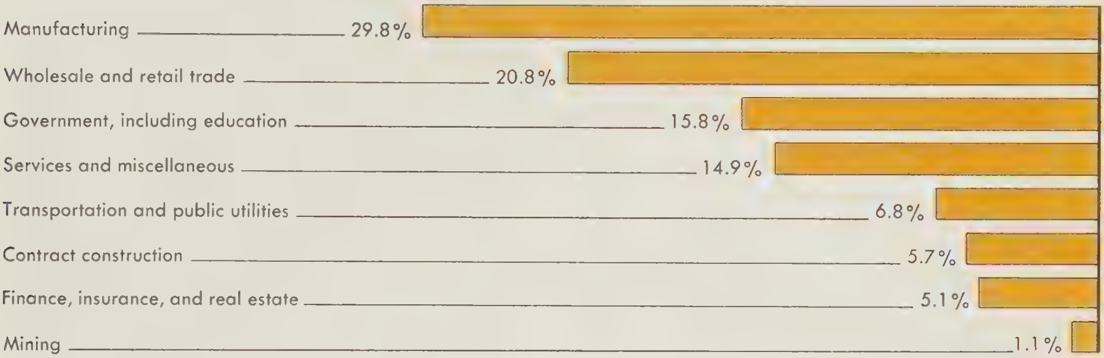
290,000 nonoperating employees with a stated degree of seniority will be employed permanently unless business declines more than 5%. Reductions are to be by attrition, and are not to exceed 6% a year. Five days earlier, wage increases spread over three years and improvements in vacation benefits were obtained by the Train Dispatchers, Yardmasters, and the three shopcraft unions (Machinists, Electrical Workers, and Sheet Metal Workers).

The national joint board set up by congressional order to arbitrate the railroad firemen's dispute in late 1963 was reactivated in an effort to prevent revival of the job dispute in 1966, when the arbitration law enacted in 1963 expires.

Taxicabs. Chicago and New York saw heated campaigns between Teamster locals and affiliates of the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) for the right to represent taxicab drivers. In Chicago, Seafarers Local 777 retained bargaining rights for 6,000 drivers, and after a 22-day strike reached agreement with the Yellow and Checker companies on contracts providing increased commissions, reduction in workweeks, and improved pension and welfare benefits. In New York, bargaining rights were won by an organizing committee sponsored by the New York Central Labor Council, after a 7-day strike against taxicab companies that was marred by violence.

Aerospace. The Lockheed, Douglas, and Aerojet General aerospace manufacturing firms concluded agreements with the Machinists and Auto Workers in July and early August, covering about 75,000 workers. The Machinists' settlement with Aerojet

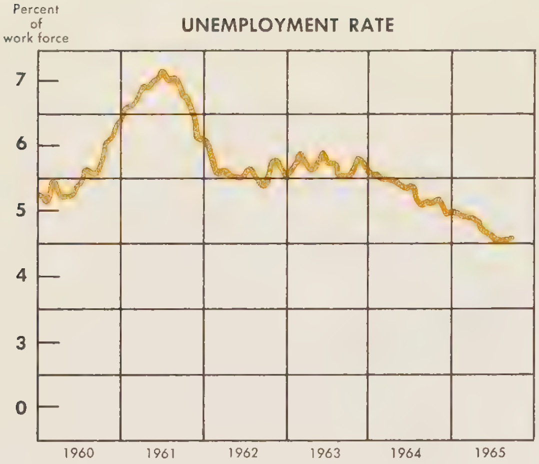
WHERE AMERICANS WORK (Nonfarm payroll jobs)

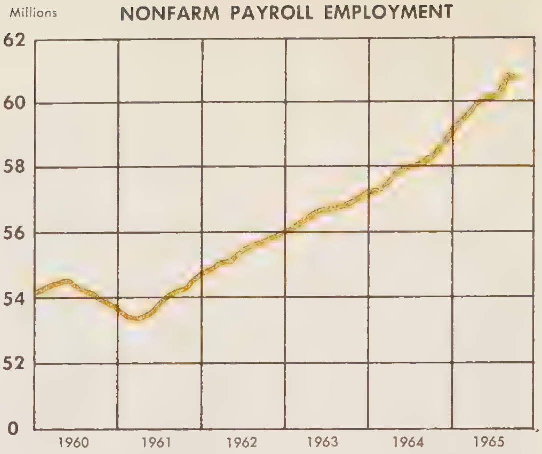


NONFARM PAYROLL EMPLOYMENT IN THE UNITED STATES

Industry group and industry	July 1965	Annual average, 1964
Manufacturing (total)	**18,105,000**	**17,303,000**
Durable goods	10,487,000	9,848,000
Ordnance and accessories	249,300	257,500
Lumber and wood products	623,700	596,500
Furniture and fixtures	420,200	402,000
Stone, clay, and glass products	646,500	615,700
Primary metal industries	1,314,200	1,226,500
Fabricated metal products	1,277,400	1,196,700
Machinery	1,737,400	1,612,200
Electrical equipment, supplies	1,661,400	1,549,100
Transportation equipment	1,752,300	1,622,600
Instruments and related products	388,000	369,000
Miscellaneous manufacturing	416,600	400,100
Nondurable goods	7,618,000	7,455,000
Food and kindred products	1,761,800	1,730,300
Tobacco manufactures	72,800	87,500
Textile mill products	921,000	897,200
Apparel and related products	1,323,000	1,309,800
Paper and allied products	648,900	630,400
Printing, publishing, and allied industries	979,800	951,900
Chemicals and allied products	913,300	877,300
Petroleum refining and related industries	188,300	186,700
Rubber and miscellaneous plastic products	452,000	430,200
Leather and leather products	357,500	353,700
Wholesale and retail trade	**12,658,000**	**12,188,000**
Wholesale trade	3,375,000	3,220,000
Retail trade	9,283,000	8,969,000
Department stores	1,105,400	1,083,400
Limited-price variety stores	291,000	306,200
Food stores	1,469,500	1,420,900
Apparel and accessory stores	620,100	632,700
Furniture and appliance stores	413,800	398,800
Eating and drinking places	1,905,500	1,808,900
Motor vehicle dealers	739,900	698,200
Other vehicle and accessory dealers	179,800	167,400
Drug stores	407,600	389,100
Government	**9,619,000**	**9,502,000**
Federal	2,407,000	2,348,000
State, including education	1,918,300	1,839,500
Local, including education	5,293,700	5,315,300
Services and miscellaneous	**9,028,000**	**8,533,000**
Hotels and lodging places	764,700	627,800
Laundries, cleaning and dyeing plants	555,800	536,700
Hospitals	1,423,900	1,357,600
Transportation and public utilities	**4,123,000**	**3,976,000**
Railroad transportation	750,300	757,600
Class I railroads	652,500	665,200
Local and interurban passenger transit	255,000	275,000
Motor freight transportation and storage	1,029,500	949,100
Air transportation	232,600	212,200
Pipeline transportation	20,200	20,200
Communications	898,100	843,900
Telephone	750,200	701,800
Radio and TV broadcasting	112,100	105,200
Electric, gas and sanitary services	628,200	612,100
Electric companies and systems	257,900	248,400
Gas companies and systems	151,600	152,200
Combined utility systems	179,600	174,000
Water, steam, and sanitary systems	30,100	37,500
Contract construction	**3,502,000**	**3,106,000**
General building contractors	1,104,900	974,800
Heavy construction	730,400	608,900
Special trade contractors	1,666,300	1,522,400
Finance, insurance, and real estate	**3,069,000**	**2,944,000**
Banking	791,400	761,400
Credit agencies, including savings and loan assns	339,300	318,100
Security dealers and exchanges	132,000	126,700
Insurance carriers	902,800	884,700
Real estate	586,900	549,800
Mining	**645,000**	**635,000**
Metal mining	86,700	81,800
Coal mining	135,700	144,400
Bituminous coal	124,900	133,300
Crude petroleum and natural gas	290,800	288,600
Quarrying and nonmetallic mining	131,400	120,000
Total	**60,749,000**	**58,188,000**

Data are adjusted to March 1963 benchmarks. Source: U.S. Department of Labor, Bureau of Labor Statistics, for all series except federal government, which is prepared by the U.S. Civil Service Commission, and except Class I railroads, which is prepared by the U.S. Interstate Commerce Commission.


UNEMPLOYMENT RATE


NONFARM PAYROLL EMPLOYMENT

General in Azusa, Calif., ended a 36-day strike. Each contract provided for an 8-cent-an-hour increase in each of the three years of the agreement, improved fringe benefits, and pensions about double the present rate. Income security plans differed among the companies and between the unions. Douglas became one of the first firms to supplement benefits available under Medicare.

Wage increases of 3 cents an hour in each of the three years of the contract were provided in a pact between the Machinists Union and the Boeing Company of Seattle, after a 19-day strike in which 35,000 workers were idle across the nation. The performance analysis system, a major bone of contention affecting work standards, was frozen to retain existing terms for six months so that a substitute plan could be worked out. The Boeing settlement was followed by a peaceful agreement between North American Aviation, Inc., and the United Auto Workers. The settlements, valued at about 50 cents an hour over three years, were expected to set a pattern in the aerospace industry.

Public Employees. In 1965, local government employees showed themselves increasingly willing to strike or take part in boycotts to obtain higher pay and better working conditions. In New York City, welfare workers, after a month-long strike, agreed to submit all issues to a fact-finding panel. Terms recommended by the panel and accepted by Mayor Robert F. Wagner provided salary increases, a limit on caseloads, new procedures for bargaining, and freedom for employees to choose health plans.

Longshoremen. Early in January, after New York longshoremen rejected a 4-year agreement reached in mid-December 1964 by the union and the New York Shipping Association, 60,000 Atlantic and Gulf Coast longshoremen went on strike. Two weeks later, after a determined effort by leaders of the International Longshoremen's Association (ILA) to explain the contract terms to the rank-and-file membership, New York longshoremen accepted the contract, but failure to agree on contracts in other ports held up a return to work. In mid-February the longshoremen broke their long tradition of not resuming work in any port until settlements had been reached at all ports, and agreed to return to work where contracts had been signed.

The 15,000 longshoremen who had remained on strike began returning to work on March 6, after ratification of a 4-year South Atlantic contract which provided a package settlement about equal to that reached in North Atlantic ports. For the first time the contract set the minimum number of men for a work gang, but it did not include the guarantee of annual hours of work that had been obtained in New York.

In another attempt to promote stability in the work force, a contract signed with the Pacific Maritime Association provided that fully employed longshoremen and warehousemen must give up other paid employment or lose certification for dock work.

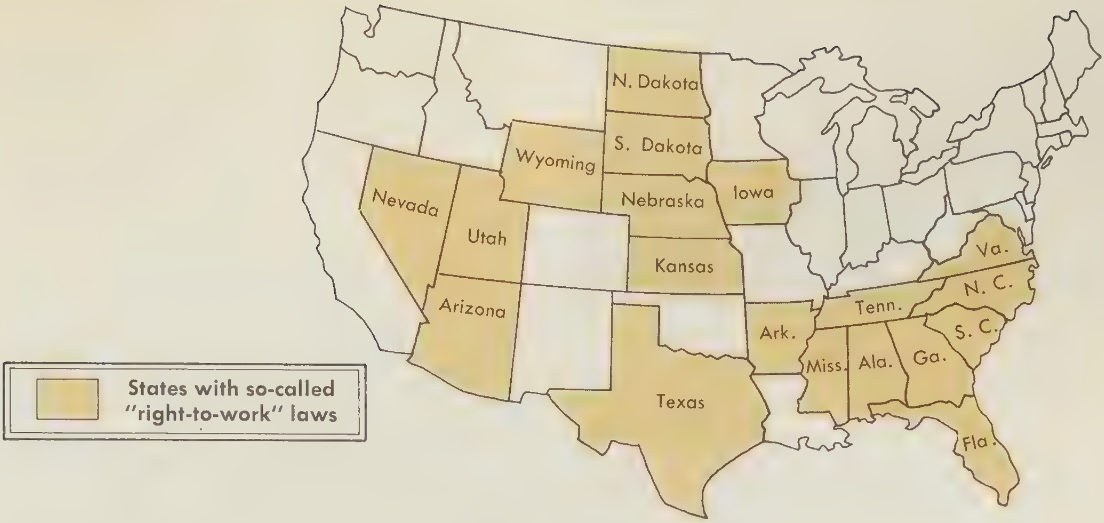
On October 1, as the contract between the ILA and the New York Shipping Association went into its second year, wage-fringe payments increased 38 cent per hour, and new guidelines on working procedures were issued by the Human Relations Committee established by the contract. Longshoremen in the New York port who do not report for work as ordered are now subject to penalties ranging from a written warning to discharge.

On the west coast, where new longshoremen quotas are established by joint union-management agreement, more than 9,000 men applied for 500 new jobs created in San Francisco by the war in Vietnam. The 500 men selected will supplement the regular force of 4,000 longshoremen, who have been working up to 50 hours a week. The job increase was the first in two years. Similar manpower increases are expected in other Pacific coast ports.

Maritime. Negotiations in the maritime industry were made more difficult by disagreement not only between employers and unions, but within these groups, and by the decrease of job opportunities in a declining industry. By midsummer the bargaining situation was in near chaos, with some contracts extended, some new agreements signed, and some strikes begun.

The manning of automated ships was a major issue. U.S. Maritime Administrator Nicholas B. Johnson stated that the government would pay labor subsidies on automated ships for a 32-man crew only, compared with subsidies for a 47-man crew on conventional ships.

The subsidy question was aggravated by a decision (July 13) of the Maritime Subsidy Board that disallowed reimbursement for certain wage and benefit increases negotiated in three earlier collective bargaining agreements. On July 23, Secretary of Commerce John T. Connor reversed the board's decision and established a new Maritime Wage Review Panel to study bargaining agreements and make recommendations to the board on subsidy reimbursements.



Concentrated government interest and assistance helped bring an end to summer-long strikes against the American Merchant Marine Institute (AMMI) by the Marine Engineers Beneficial Association, the American Radio Association, and the International Organization of Masters, Mates, and Pilots. Similar 4-year contracts provided for an increase of 3.2% in wages and fringe benefits, elimination of contract inequalities among seagoing unions, and improved job security. Later settlements by smaller unions with the AMMI and the Pacific Maritime Association followed the same pattern.

Settling the crucial issue of manning automated ships was left to Secretary of Labor W. Willard Wirtz and AFL-CIO President George Meany. Interim manning disputes were assigned to a panel consisting of James J. Reynolds, assistant secretary of labor; Theodore W. Kheel, New York lawyer and labor-management arbitrator; and Lane Kirkland, assistant to President Meany. In late October the panel achieved agreement between the United States Lines Company and the Marine Engineers on a manning dispute which had delayed loading of the new $10.5 million freighter *American Resolution*.

In September the Seafarers International Union (SIU) agreed to a 3-year contract on the Atlantic and Gulf coasts with passenger, dry cargo, and tanker ship operators—primarily the unsubsidized segment of the maritime industry. The contract provided a wage increase that gave SIU members parity with National Maritime Union members.

Newspapers. Attempts to slow the advance of automation or to cushion its effects by giving job security to union members created turmoil in the newspaper industry in 1965. No real solution was in sight by the end of the year.

In Baltimore, American Newspaper Guild members returned to work on June 4 after a 47-day strike, leaving wages and union security issues to be settled by an arbitration panel. The New York *Post* obtained agreement from Bertram A. Powers of the International Typographical Union for a trial run on the use of a computer to set type. The experiment was abandoned after nine days.

The Newspaper Guild's 2,200 members at the New York *Times* went on strike on September 26, and six other members of the New York Publishers Association ceased publishing their dailies. Altogether 17,000 workers were idled. The New York *Herald Tribune* resigned from the association on September 25 and resumed publication two days later. The issues in the strike were not the usual monetary questions, since both parties had accepted a $12 package increase negotiated by the typographers in early April. Instead, the Guild sought protection for future employees, as well as present members, against loss of jobs due to automation. The Guild also wanted veto power over the installation of new equipment or processes, and sought to have included in its bargaining unit some 200 additional workers, including columnists, editors, and some reporters and photographers.

On October 10, members of the Guild approved a settlement on terms proposed by Theodore W. Kheel, special mediator for Mayor Wagner. The *Times* agreed to change from a company-administered pension plan to one jointly administered by the company and the Guild. The Guild won a partial union shop, with editorial employees exempted from the requirement to join. The paper agreed to give six months' notice before introducing automation equipment, to guarantee jobs of full-time employees, and to give lesser guarantees to part-time workers. The settlement included new safeguards for Guild job rights, but denied the union any veto power over automation in areas of possibly overlapping union jurisdiction. The round of bargaining ended with widespread recognition that major problems were still unsolved.

WORK STOPPAGES

During the first 10 months of 1965, work stoppages totaled approximately 20.6 million man-days, compared with 20.1 million man-days during the corresponding period in 1964. In both years, strike idleness during the first 10 months amounted to 0.19% of estimated working time. The issues of job protection against the effects of automation resulted in a variety of strikes, including those by maritime and dock workers and newspaper workers in Baltimore and New York.

Work stoppages preceded contract settlements in many industries. The stoppages included a 20-day walkout by 17,000 American Motors employees in Milwaukee and Kenosha, Wis.; a 24-day strike that halted work on nine submarines at the General Dynamics Corporation in Groton, Conn.; and a 20-day wildcat strike that affected 11,000 members of the United Mine Workers in West Virginia, Pennsylvania, and Ohio.

TRADE UNION DEVELOPMENTS

In 1965, AFL-CIO membership rose to 13.1 million workers, an increase of nearly 250,000 in a year.

UPI

I.W. ABEL takes oath as head of the United Steelworkers on July 1, 1965. Outgoing USW President David J. McDonald (*l.*) and AFL-CIO President George Meany watch.

Officials. Two leading trade unionists were replaced as presidents of their organizations. David J. McDonald was succeeded by I.W. Abel as president of the United Steelworkers, and James B. Carey, who had claimed re-election as president of the International Union of Electrical Workers, was succeeded by Paul Jennings after a Department of Labor examination of the ballots cast in the union election showed irregularities. Several elder statesmen of the labor movement retired from office, either voluntarily or because of age-limit requirements. Invariably, however, their successors were long-time members of the union hierarchy, and the changes in personnel did not appear to represent any change in union goals.

As the year ended, lawyers for James R. Hoffa, president of the Teamsters Union, prepared a final appeal from Hoffa's criminal conviction on a charge of jury tampering. An 8-year prison sentence for Hoffa was stayed pending outcome of the appeal.

Pensions. The United Mine Workers Welfare and Pension Fund increased pensions to $100 a month for 69,000 retired soft-coal miners. The increased income of members of the International Ladies Garment Workers Union (ILGWU) and cost savings (made possible by the merger of 41 separate funds in 1964) enabled trustees of the ILGWU master retirement fund to increase potential pensions for most of the union's 440,000 members by 20%.

Retirements increased in the automobile industry under the liberalized pension plan which became effective September 1. Most of the increase resulted from the early retirement clause allowing full pensions for workers retiring as early as age 62.

Organizational Changes. Labor continued to merge organizations having related constituencies, and some unions changed their names to reflect their membership more accurately. The Hosiery Workers Union was dissolved on April 5, and its members were absorbed into the Textile Workers of America. New York City Lithographers Local 1, which had withdrawn from the merged Lithographers and Photoengravers Union, affiliated with the International Typographers Union. Discussions continued on mergers of the Seafarers Union with the National Maritime Union, the Boot and Shoe Workers Union with the United Shoe Workers, and the Lithographers and Photoengravers Union with the Printing Pressmen.

District 50 of the United Mine Workers, a catch-all unit with workers in industries other than mining, changed its name to International Union of District 50. The International Hod Carriers, Building and Common Laborers Union became the Laborers International Union of North America. To show broadened areas of interest, the Order of Railroad Telegraphers changed its name to the Transportation-Communication Employees Union; and the Office Employees Union, to the Office and Professional Employees International Union.

The Association of Western Pulp and Paper Workers (independent), representing 21,000 west coast workers drawn from two AFL-CIO affiliates (the Pulp and Sulphite Workers Union and the Papermakers and Paperworkers Union), adopted a constitution and continued its organizational work.

LABOR AND THE LAW

In 1965 the U.S. Supreme Court held the Landrum-Griffin Act's ban on Communists in union office (*U.S.* v. *Brown*) to be unconstitutional. In another decision, the Supreme Court held that an employer has an absolute right to go out of business for any reason, but that partial termination designed to "chill" labor organization at remaining plants is an unfair labor practice (*Textile Workers Union of America* v. *Darlington Mfg. Co.*). (See also LAW.)

Federal Legislation. Organized labor took satisfaction from the passage of Medicare, education, and housing bills that they strongly supported. However, none of labor's three major legislative objectives even came to a vote: raising the minimum wage and expanding coverage under the Fair Labor Standards Act; improving unemployment insurance laws; and repealing the so-called right-to-work clause in Section 14(b) of the Taft-Hartley Act. Late in the congressional session, when a cloture vote to cut off Senate debate on the repeal of Section 14(b) failed to win even a simple majority, the issue was shelved until 1966. A review of the entire Taft-Hartley Act is expected in 1966.

Bonding requirements for union officers and employees under the Landrum-Griffin Act were eased, thus saving the unions some 25% in bonding fees. Congress gave 1.7 million federal classified and postal workers a 3.6% increase across the board.

In October, President Johnson set up an automotive agreement adjustment-assistance board to provide aid for workers who may suffer dislocation as a result of legislation permitting arrangements for free trade in automobiles and parts between the United States and Canada.

State Legislation. In an exceptionally active year, legislatures of 47 states and Puerto Rico enacted more than 700 laws affecting labor. Several states set standards for migrant workers' housing, transportation, and field sanitation, and a number removed the agricultural exemption from already existing labor laws. Delaware, Indiana, and Maryland adopted minimum-wage laws, bringing to 39 the number of states having such laws. Laws prohibiting racial or religious discrimination in employment practices were enacted in nine additional states (for a total of 34), and the District of Columbia adopted a similar anti-bias ordinance. Idaho, Indiana, Maine, Michigan, and North Dakota were added to the 18 states already prohibiting job discrimination because of age. Eight states and the District of Columbia joined Hawaii and Wisconsin in prohibiting discrimination because of sex.

Safety. Iowa created a new Employment Safety Commission with authority for making general safety rules. New Jersey broadened the powers of its Department of Labor and Industry and extended coverage to all places of employment. Maine authorized the correction of all hazards—instead of only specific ones—in industrial plants. Eleven states added a requirement that pupils and teachers in certain vocational education courses wear eye-protective devices.

Labor-Management Relations. Indiana's repeal of its right-to-work law leaves 19 states with such laws of general application. (In a 20th state, Louisiana, the law is applicable only to certain agricultural workers). Bargaining rights were granted to all public employees in Michigan and Delaware, to firemen in Maine and Wyoming, to firemen and policemen in Rhode Island, and to teachers in Connecticut. Michigan made the Labor Mediation Board responsible for the administration of labor relations—a function formerly left to the courts. West Virginia gave statutory authority to the state commissioner of labor to investigate and mediate labor disputes. Hawaii and Washington prohibited the use of lie detector tests as a condition of employment. Iowa and Maine prohibited the use of professional strikebreakers, and Michigan extended its prohibition to cover the importation of any strikebreakers.

NATIONAL LABOR RELATIONS BOARD

Separate units of selling, nonselling, restaurant, and clerical employees were permitted by the National Labor Relations Board (NLRB) in three cases (Allied Stores of New York, Lord & Taylor, and Arnold Constable) on unit-determination policy in retail department stores. Unions usually have found the sales force of a department store difficult to organize because it is made up largely of women working part-time on a temporary basis. The new ruling is expected to encourage unions to concentrate their efforts on nonselling groups, composed largely of men working full time.

Unions now have the same right as employers to withdraw from a multiemployer bargaining unit. Under NLRB policy, an employer can withdraw from such a unit at will, provided only that the withdrawal request is timely and unequivocal. In two cases involving Detroit newspapers, the NLRB said it could see no reason for adopting more restrictive rules to govern a union's withdrawal.

Sam Zagoria, a former officer of the American Newspaper Guild, was named to the NLRB, and Frank W. McCulloch was reappointed as board chairman.

EMPLOYMENT AND UNEMPLOYMENT

The civilian labor force totaled almost 76 million in October 1965, an increase of 1.6 million over the same month in 1964. About one third of the expansion occurred among teen-agers, although teen-age workers account for less than 10% of the labor force. Total employment increased by 2.1 million to an all-time high of 73.2 million. Again, much of the gain was among teen-agers, allaying fears of mass unemployment among this group.

In 1965 total unemployment fell while total employment increased, moving the unemployment rate down to 4.3% in October—the lowest level since August of 1957. The greatest improvements in jobless rates were among teen-agers, young men from 20 to 24 years old, and adult women. Long-term unemployment dropped to less than 1% of the labor force. The unemployment rates for nonwhites remained substantially higher than for white workers.

LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT

	October 1965 (est.)	October 1964 (est.)
Total labor force	78,713,000	77,112,000
Civilian labor force	75,953,000	74,375,000
Employed	73,196,000	71,123,000
Agricultural	4,954,000	5,126,000
Nonagricultural	68,242,000	65,997,000
Unemployed	2,757,000	3,252,000

WAGES AND HOURS

The factory workweek averaged 41.2 hours in October 1965—the highest October level since 1952—and overtime hours, 3.9. Workers in manufacturing received average weekly wages of $108.75 in that month. Average hourly earnings were a record $2.64.

Violations of the federal wage and hour law rose 23% over the previous year, as measured by the amount of money found to be owing to workers under the Fair Labor Standards Act (FLSA). About $74 million was owed for the fiscal year 1965, including $156,202 in a new category—underpaid wages due women by virtue of the equal pay amendment of the act.

GEORGENA POTTS
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LABRADOR. See NEWFOUNDLAND.

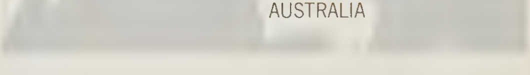
LACROSSE. See SPORTS.

LAOS

The escalating war in adjacent Vietnam, which might have been expected to increase political and military difficulties for Laos in 1965, failed to do so. Indeed, the anti-Communist government of the landlocked former French colony strengthened itself. In contrast to previous years, the insurgent Communist Pathet Lao did not significantly enlarge the amount of territory it controlled.

Military Lull. Although the number of Communist North Vietnamese troops in Laos increased in the early part of the year, the existing balance of power between the rival factions in the country was not altered. Pathet Lao troops numbered approximately 20,000, and the Vietnamese units probably increased the total insurgent force to about 27,000. In addi-

LAOS · Information Highlights



Area: 91,428 square miles.
Population: 1,960,000 (mid-1964 est.).
Chief City (1962 est.): Vientiane, the capital, 162,297.
Government: *King*—Savang Vatthana (acceded Nov. 4, 1959); *Premier*—Prince Souvanna Phouma (took office June 23, 1962); *Parliament*—National Assembly, 59 members; party seating (1965): Independents, 32; Neutralists, 12; Youth Movement, 10; Union Movement, 5.
State Religion: Buddhism.
Education: *Total school enrollment* (1962)—126,763 (primary, 120,715; secondary, 4,439; teacher-training, 1,118; technical, 383; higher, 108).
Finance (1963–64 est.): *Revenues,* $5,700,000; *expenditures,* $26,100,000; *monetary unit,* kip (240 kips equal U.S.$1).
Crops (metric tons): Rice (1962–63), 510,000; tobacco (1965), 2,700.
Foreign Trade (1963): *Exports,* $1,000,000 (chief exports: wood, minerals, coffee); *imports,* $29,000,000 (chief imports: foodstuffs, textiles, machinery, metals).
Transportation: *Roads* (1964), 2,734 miles (364 paved); *motor vehicles* (1964), 7,103 (automobiles, 5,394); *national airline,* Royal Air Lao; *principal airport,* Vientiane.
Communications: *Telephones* (1964): 1,031; *radios* (1962), 22,000; *newspapers* (1962), 5 (daily circulation, 21,000).

PHOTO FROM EUROPEAN

LAOTIAN PREMIER PRINCE SOUVANNA PHOUMA (r.), visiting London on July 21, acknowledges greeting of the crowd with his host, British Prime Minister Harold Wilson.

tion, upwards of 1,500 Communist Chinese troops were situated in the northwest where Laos and China share a common frontier, presumably as a protecting force for Chinese road-building crews in Pathet Lao-held territory. Loyalist forces totaled about twice the combined number of Pathet Lao, Vietnamese, and Chinese forces.

It was not the superior numbers of the government forces that checked the Communists, however. The Pathet Lao did not embark on a major offensive in April, the last month of the dry season, as it has always done, largely because of the impact of the war in Vietnam. There were skirmishes and artillery exchanges between the two sides, particularly in the area around Thakhek in the Mekong River valley late in the year, but the military action was less than that in previous years.

The Royal Laotian Air Force distinguished itself by effectively attacking Communist-held areas. But much more important was the bombing of road links to Pathet Lao supply bases in North Vietnam by American jet aircraft based outside Laos. These attacks preceded the start of U.S. bombing raids on supply and infiltration routes from North to South Vietnam through Laos—the so-called Ho Chi Minh trail—in late 1965. North Vietnam was increasingly limited in its ability to support Pathet Lao operations against the Laotian government as a result of American air attacks against North Vietnamese territory.

Internal Politics. The strengthening of the Laotian government resulted partly from a showdown early in the year between the ambitious right-wing Gen. Phoumi Nosavan and military forces loyal to Premier Prince Souvanna Phouma. On the night of January 31 an unsuccessful coup d'état was staged by Phoumi Nosavan and Gen. Siho Lamphouthacoul, the young police commander who had been coleader of an abortive coup in 1964. There was sporadic fighting in Vientiane for a few days, but loyal government forces gained control by February 4, and the two conspirators took political refuge in Thailand.

The main effect of General Phoumi's failure and flight was to end his efforts to take over the anti-Communist political leadership, thereby strengthening the government of Souvanna Phouma. In addition, the personal paramilitary organization maintained by Siho was brought under the control of the Interior Ministry, with some units being assigned to the army.

In March, troops loyal to Phoumi seized control of Thakhek, but the rebellion was quickly quashed by government forces. A similar revolt at Pakasane in late April also was quelled.

Elections. The Laotian government felt secure enough to hold partial elections in July. It declared that the tripartite regime involving neutralist, right-wing, and Communist participation—but from which the Communists had long since withdrawn—had ended with the expiration of the mandate of the sitting National Assembly on April 24. (The coalition government was a result of agreement among the leaders of the rival Laotian factions in 1962, when the Geneva accords neutralizing the country were signed.)

A select electorate of about 20,000 persons, mainly civil servants, military and police officers, central government and local officials, and merchants, participated in the July 18 balloting. The 59-member legislature subsequently endorsed continuation of the leadership of Premier Souvanna Phouma. The Communist Pathet Lao boycotted the election and refused to participate in the government.

Economy. With the lull in the fighting and the strengthening of government prestige, the weak Laotian economy showed some signs of improvement. The currency was stabilized, and corruption reportedly was curtailed. Sisouk Na Champassak, who had succeeded General Phoumi as finance minister, and who was an able and dynamic leader of the reformist youth movement, worked effectively to uplift the economy. Sisouk's party showed strength in the July election, thereby bringing its leader to the forefront of Laotian politics.

Nevertheless, the government remained almost totally dependent on foreign aid, with American funds making up the annual deficit in the Laotian budget. United States aid in 1965 amounted to some $50 million, excluding the military equipment that outfits all the armed forces.

Diplomacy. Premier Souvanna Phouma took the initiative on the international diplomatic scene during the year. He visited Britain, France, and India in midyear. In particular he sought British support for the reconvocation of the 1954 Geneva Conference for all of onetime French Indochina (Vietnam and Cambodia as well as Laos). However, the Soviet Union, cochairman (with Britain) of that conference, was opposed to such a move.

Prince Souvanna Phouma vigorously, but futilely, sought a cease-fire and peace talks with his half-brother, Communist leader Prince Souphanouvong. Despite his inability to obtain a conciliatory response from Souphanouvong, Souvanna Phouma tried to preserve Laos' precariously maintained neutrality. In December he took a strong stand against the introduction of American ground forces in Laos to halt the supply of men and materials from North to South Vietnam over the Ho Chi Minh trail.

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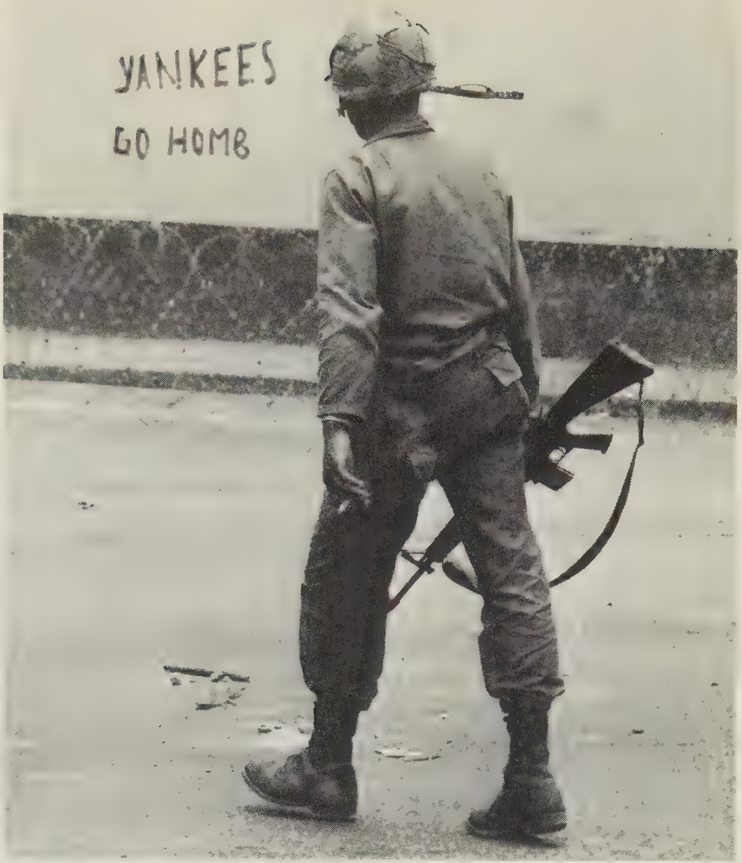
LATIN AMERICA



UPI

TROUBLE IN LATIN AMERICA in 1965 centered in the Dominican Republic. After civil war broke out in April, the United States sent in troops to protect American lives and help restore order. Following the intervention, anti-American sentiment ran high, as reflected in this sign facing a U.S. soldier on patrol duty in the streets of Santo Domingo.

LATIN AMERICA

Inter-American political and economic cooperation was hampered in 1965 by U.S. military intervention in the revolution in the Dominican Republic. The intervention strengthened anti-Yankee movements and unsettled military and civilian regimes throughout Latin America. The decision of the Organization of American States (OAS) to assume collective responsibility for the action relieved the U.S. government of sole responsibility for the intervention, but the decision did little to relieve the fear among some Latin Americans that the OAS was acting as a shield for the implementation of United States policies in the Western Hemisphere.

DOMINICAN REVOLUTION

The revolt of April 24, which ended the regime of Donald Reid Cabral, was the eighth political change in the Dominican Republic since the assassination of dictator Rafael Trujillo in 1961. At first it seemed likely that a liberal military faction would restore the former president, Juan Bosch, to power. But Brig. Gen. Elías Wessín y Wessín, who had ousted and exiled Bosch in 1963 for having tolerated Communists, strongly opposed Bosch's return. Wessín felt that Communists had prompted the distribution of arms to civilians on April 26, 1965, and he so reported to U.S. Ambassador W. Tapley Bennett and to U.S. military and intelligence agents. Bennett soon indicated that he was officially neutral but that he personally favored Wessín. When rebel leaders appealed to him to help bring a halt to air raids ordered by Wessín against rebel-held areas of Santo Domingo, the ambassador instead suggested that the rebels surrender.

U.S. Intervention. The United States landed Marines in Santo Domingo on April 28 and declared the step was necessary to save American lives. About 3,000 U.S. citizens in the city were said to have been threatened by the conflict. On May 1, President Johnson's personal representative, John Barlow Martin, confirmed earlier reports that the rebel side was Communist dominated. Within a few days there were more than 21,000 U.S. troops in the country.

During the first phase of U.S. involvement (April 24 to mid-May), Washington policy makers were strongly influenced by the overstated estimates of Communist strength made by General Wessín. A State Department white paper of May 6 identified 58 Dominican leftists (4 of them listed twice), who, it was claimed, had seized control of the revolt. The document was criticized by some observers as being skimpy and misleading. A second report, revealed on June 15, listed the activities of 77 Dominican Communists between April 24 and May 5, and asserted that two of the three Dominican Communist parties were being helped by Cuba.

President Johnson declared on May 2 that "the American nations cannot, must not, and will not permit the establishment of another Communist government in the Western Hemisphere." This "Johnson Doctrine" revived memories of the unilateral enforcement of the Monroe Doctrine under the long-since discarded Roosevelt Corollary (1904).

The organization of a broadly based non-Communist Dominican regime was the next U.S. task. Dominican Brig. Gen. Antonio Imbert Barreras was selected to lead this civilian-military junta, which was formed on May 7. Imbert expelled eight high-ranking ultraconservative military officers but failed to secure the resignation of General Wessín.

It became increasingly clear that the United States

MEXICO
BR. HONDURAS
HONDURAS
GUATEMALA
EL SALVADOR
NICARAGUA
COSTA RICA

was unable to control the junta it had helped establish. In mid-May, Imbert ordered his 2,000 troops to attack the rebel stronghold north of the security corridor that had been cut through rebel-held territory by U.S. Marines on May 3. Imbert's action was not endorsed by key U.S. officials, and American armed forces were instructed to remain neutral. U.S. Marine commanders, harassed by rebel snipers, nonetheless assisted Imbert forces in driving the rebels from the area.

It also became apparent that the Imbert junta was not broadly representative. Its chief domestic support came from the traditional ruling class—military officers, landowners, big businessmen, and bankers. U.S. Senator J. W. Fulbright, who strongly opposed U.S. intervention, characterized the Imbert junta as being a corrupt and reactionary military oligarchy. The rebels, on the other hand, had attracted the sympathy of the younger Dominican military officers, professional groups, an aroused working class, and a growing number of peasants.

During the four-month civil war (April 24–August 31) the United States spent $67 million to ease the ravages of the conflict. It paid the salaries of Dominican civil service employees and of military personnel on the junta side (the rebels had rejected an offer of U.S. funds to pay the salaries of their own personnel). The United States distributed 400 tons of food daily, and the U.S. Agency for International Development employed 1,000 Dominicans.

U.S. Role in the Peace Settlement. Although the OAS and the United Nations also were involved in the Dominican crisis, the United States shouldered the major responsibility for reconciling the warring factions. By mid-May the United States had reappraised the strength of Communist conspirators, and a search commenced for a compromise leader who could head an interim regime that would be more broadly representative than the Imbert junta. Both the Central Intelligence Agency (CIA) and the Federal Bureau of Investigation were called upon to screen candidates. One of them, Antonio Guzmán, a large landowner who had served both the Bosch and Reid administrations, was secretly flown to Washington and was found to be acceptable as a compromise leader. A four-man mediation team, headed by President Johnson's special assistant for security affairs, McGeorge Bundy, was successful in getting both Bosch and rebel leader Col. Francisco Caamaño Deñó to support Guzmán. But General Imbert refused to relinquish power to a compromise leader. He was finally persuaded to resign (August 30) when he was warned by Commodore Francisco Rivera Caminero of the Dominican Navy to agree or be forced out of power.

Provisional Government. The Reconcilation Act of August 31 terminated one phase of the Dominican revolution, which had cost 3,000 lives (including those of 31 U.S. servicemen). A provisional regime under Héctor García-Godoy, former foreign minister in the Bosch cabinet, took office on September 3. It was entrusted with the responsibility for maintaining the tenuous truce between the warring parties and for preparing the country for elections in May 1966.

The United States accorded the new government prompt economic and military assistance. A $20 million U.S. grant to the country was announced September 4. To reinforce a decree which abolished the autonomy of General Wessín's elite force of 1,600 troops, U.S. military and CIA agents persuaded the general to board an American plane on September 9 for exile in Miami.

OAS Role. As early as April 27 the United States had convened a meeting of the OAS Peace Committee, but this body declared that it was not authorized to deal with the domestic disputes of its members. The United States then notified the Latin American ambassadors in Washington of its intention to intervene. On May 1 the OAS Council established a five-nation investigation committee and directed it to proceed to the Dominican Republic.

The United States convened an emergency meeting of the OAS Council on May 3, and proposed that an Inter-American Peace Force be established. On May 6 the OAS foreign ministers approved the formation of the peace force by the required minimum majority of 14-5 (Chile, Mexico, Ecuador, Peru, and Uruguay voted against, and Venezuela abstained). The legality of the action was questioned, because Article 15 of the OAS Charter prohibits collective intervention in the domestic affairs of member nations. Although the 1962 Punta del Este resolution called for collective action against Communist intervention, it was alleged that no Communist conspiracy had been proved in this case.

The Inter-American Peace Force was slow in being organized. Optimistic estimates that more than half of the Latin American countries would supply troops were unfulfilled. With the exception of democratic Costa Rica, which sent 21 policemen, countries dominated by military regimes made up the contributors. (Brazil supplied 1,200 of the 1,800 Latin-American soldiers; all but 21 of the rest came from Honduras, Nicaragua, and Paraguay. The Inter-American Peace Force was formally constituted on May 23 under the command of a Brazilian general, Hugo Penasco Alvim.

The OAS Human Rights Commission began an investigation in the Dominican Republic on June 1. It looked into charges of mistreatment of prisoners by both sides and tried to trace a growing number of persons who were reported missing. On June 27 the commission criticized the Imbert junta for refusing to cooperate with an investigation of reported maltreatment of civilian prisoners.

The several OAS political mediator groups met with varying success. The first, a five-member peacekeeping commission, resigned, claiming that the four-man Bundy commission from the United States had usurped its role. On May 20 the OAS selected its secretary general, José Antonio Mora, to replace the committee and to negotiate a cease fire. Within ten days Mora was denounced by junta and rebels alike.

A three-member Inter-American Peace Committee (United States, Brazil, El Salvador) arrived in the

CUBA
DOMINICAN REPUBLIC
JAMAICA
HAITI
PUERTO RICO
TRINIDAD AND TOBAGO
PANAMA
VENEZUELA
BRITISH GUIANA
SURINAM
FRENCH GUIANA
COLOMBIA
ECUADOR
PERU
BRAZIL
BOLIVIA
PARAGUAY
URUGUAY
CHILE
ARGENTINA

UPI

SANTO DOMINGO: Dominican loyalist soldiers man a position on the outskirts of the city as they patrol for rebel soldiers during civil war in Dominican Republic.

Estudantes e Trabalhadores
Contra a ditadura
WIDE WORLD

RIO DE JANEIRO: Brazilian students march through downtown streets October 27 protesting President Branco's rule. Sign reads: "Students and workmen against dictatorship."

BUENOS AIRES: Argentine police use tear gas against Peronist and Communist demonstrators protesting government threat to control labor unions.

KEYSTONE

Dominican Republic on June 3. Headed by Ellsworth Bunker, U.S. ambassador to the OAS, the committee was charged with preparing an acceptable peace proposal. The Reconciliation Act of August 31 was the product of the committee's negotiation.

The interim regime of President García-Godoy was helped by OAS agencies. OAS economic advisers and the Human Rights Commission were sent to the country and an electoral commission was formed to supervise the 1966 elections. In the meantime, because García-Godoy was losing the confidence of Dominican military leaders, Ambassador Bunker tried to restore harmony. To forestall a revolutionary plot by rightist military chiefs, he arranged for the occupation of downtown Santo Domingo by the Inter-American Peace Force on October 25.

UN Role. The UN provided a forum for discussion of the situation in the Dominican Republic. From the outset, the role of the United States and the OAS was questioned by some members. On May 3, the Uruguayan delegate to the UN Security Council assailed the so-called Johnson Doctrine as a return to gunboat diplomacy and attacked OAS collective action. Secretary General U Thant declared that the inter-American force violated Article 53 of the UN Charter, which requires Security Council approval of proposed regional enforcement action. The United States withdrew its resolution supporting OAS authority in the Dominican crisis, rather than have it voted down. On May 22 it abstained in an otherwise unanimous vote for a resolution which ignored the OAS and stressed the Security Council's authority in calling for a cease fire.

The UN secretary general's special representative, José Antonio Mayobre of Venezuela, arrived in the Dominican Republic on May 17. Later he was joined by a military observer, Lt. Gen. Indar Jit Rikhye of India. In reporting violations of the Dominican cease-fire agreements on July 16 and July 21, and the alleged infringement of human rights in the country, Mayobre severely criticized the Imbert junta forces.

Latin American Reaction. Support in Latin America for the military intervention in the Dominican Republic came from military officers, large landowners, many church leaders, and from the governments of countries dominated by these groups. Cuban Premier Fidel Castro, on the other hand, reflected the mood not only of Communists but also of some labor, professional, and intellectual groups when he referred (May 26) to the operation as an "American Holy Alliance."

Record votes in the Argentine and Chilean chambers of deputies on May 14 and June 11, respectively, condemned the operation. In the Brazilian congress, long since cleansed of subversive elements by the military regime, key leaders viewed the action as tearing up the Charter of the OAS. In his state of the union address on September 1, Mexican President Díaz Ordaz reaffirmed his country's staunch opposition to the entire Dominican venture. The Johnson administration unsuccessfully solicited the support of Teodoro Moscoso, former coordinator of the Alliance for Progress, and of Romulo Betancourt, former president of Venezuela. The former Mexican ambassador of the OAS, Luis Quintanilla, bitterly attacked collective intervention. Student-led mass demonstrations before U.S. diplomatic and business establishments took place in some Latin American capitals.

POLITICAL STABILITY

Washington's policy toward communism in the Western Hemisphere continued to aggravate anti-U.S. sentiments in Latin America. Critics of collective intervention and of U.S. support of unpopular anti-Communist governments questioned whether these policies effectively combat communism.

Intervention in the Dominican Republic had revived the vigor of Communist guerrilla activity in several Latin nations. Although Latin American governments remained fairly stable in 1965, many observers were concerned over the extent to which conservative-military regimes had gained ascendancy in the majority of Latin states.

U.S. Policy. After the Dominican intervention, the image of "Yankee imperialism"—equated with U.S. determination to prevent the spread of communism—was reinforced in July with the exposure and subsequent cancellation by the U.S. government of Project Camelot, which was designed to measure the likelihood of an armed insurgency in a developing country and to work out methods to counter it. The $6 million project was financed by the U.S. Department of Defense and "other U.S. agencies." Anti-United States sentiments were fanned once again across Latin America by a resolution passed (by a vote of 312–20) in the U.S. House of Representatives on September 20, endorsing unilateral use of force to prevent a Communist take-over anywhere in the Americas. Latin American public opinion was further aroused on October 12 when U.S. Under Secretary of State Thomas C. Mann emphatically reiterated a hard-line policy toward communism in the Americas. He deplored popular front governments, defended U.S. policy in the Dominican Republic, and endorsed collective intervention "to protect weak and fragile states from subversive elements." The question raised by these U.S. policies, Senator Fulbright asserted on September 15, was whether, "by supporting unpopular oligarchies, we drive the rising generation of educated and patriotic young Latin Americans to an embittered and hostile form of communism like that of Fidel Castro."

On the other hand, the United States attempted to remove two sources of Latin resentment. On September 24, the U.S. and Panamanian governments announced they had agreed in principle on a new Panama Canal treaty, subject to ratifications in both countries. The United States would recognize Panamanian sovereignty over the Canal Zone, give Panama a major role in operating the canal, and provide larger revenues to Panama. In an agreement with Mexico, on March 22, the United States said it would construct a 13-mile canal to carry the salt-polluted water of an Arizona drainage project safely below a Mexican irrigation dam on the Colorado River.

Communist Activity. The United States assisted the Latin American governments in combating Communist and left-wing disturbances. In mid-July, the fifth semiannual meeting of Central American and U.S. security officers adopted a joint program to prevent their nationals from traveling to Communist countries for guerrilla training.

Among the Central American governments, the Guatemalan military regime of Col. Enrique Peralta Azurdia was the most harassed by guerrilla activity. The regime was implicated in the assassination on October 31 of the only liberal, civilian candidate for the presidency, thus raising doubts about the freedom of the March 1966 elections. In South America, reform-minded Peruvian President Fernando Belaúnde Terry reluctantly suspended constitutional rights while waging an effective campaign against Castro-inspired guerrillas in the Andean valleys between July and October. Only one important band of 150 Communist-oriented guerrillas remained in Colombia after 17 years of bloodshed, which had cost 200,000 lives. The conservative government of President Guillermo León Valencia, however, used student riots to justify declaring a state of siege on May 21. He then instituted unpopular inflation-curbing reforms, which won the reinstatement of U.S. economic assistance in October after a year's suspension. The oil-rich liberal regime of Venezuelan President Raúl Leoni continued to be a Communist target. On April 10 and November 5, vigilant police arrested incoming Europeans carrying U.S. currency intended to finance Communist terrorism.

Other Countries. Undemocratic regimes successfully manipulated coercive as well as persuasive measures to stay in power, while the more democratic governments frequently used nationalistic appeals to secure political stability. In Brazil, President Gen. Humberto Castelo Branco abandoned the last vestiges of democracy on October 27 by assuming virtually dictatorial powers. The military regimes of Bolivia and Ecuador used armed force to quell civil disturbances. In Honduras, Gen. Osvaldo López Arellano legalized his two-year rule by holding carefully controlled elections and was inaugurated as president on June 6. Chilean president Eduardo Frei Montalva received legislative endorsement (with Communist support) in November to "Chileanize" U.S. copper production. Chile, Mexico, and Argentina thwarted the U.S. economic embargo against Communist China by selling copper and wheat to Peking. In Argentina, the nationalistic Peronista party was successfully reincorporated into the political system after the March 14 elections.

ECONOMIC AND SOCIAL DEVELOPMENT

Latin American exports declined in 1965, but private investment increased and the two Latin American economic associations made progress in providing larger regional markets. Social achievements, meanwhile, were not keeping pace with population growth.

Trade. Increased commodity prices resulting from a prolonged industrial boom in the United States and Europe pushed Latin American exports to a record $10 billion in 1964 (7.5% above 1963), while imports remained at $8.5 billion. However, Latin American trade in the last 10 years had dropped from 11% to 6% of the world's total. Because falling commodity prices accompanied the slackening pace of the industrial boom late in 1964, the estimated 1965 Latin trade dropped below the previous year's.

The 25-year low in world sugar prices affected the economies of many Latin American countries. Fourteen of them depended on world market prices for 36% of their combined 1964 sugar exports, which were selling at 1.6 cents per pound in September 1965, as compared with 11 cents per pound a year earlier. The rest of the sugar was being sold in the United States at the support price of 5.6 cents per pound. U.S. legislation in 1965 that eliminated a 1-cent-per-pound sugar import fee will provide an additional $40 million to the Latin American sugar-exporting countries. Chile's copper exports benefited from rising world prices, which increased from 32.5 to 38 cents per pound between May and October 1965.

Economic Associations. In December 1964 the Latin American Free Trade Association (LAFTA) approved a common list of freely traded products, comprising 25% of total Latin American trade. The cumbersome methods for tariff reductions and the association's limited membership (Mexico and all the South American countries except Bolivia and Venezuela) prompted four Latin experts from the OAS and the UN to recommend LAFTA's replacement by a genuine common market similar to the European Economic Community. The proposal, made on April 12, 1965, proved to be another casualty of the Dominican intervention. But LAFTA was strengthened at its November 1965 meeting by the creation of a high-level advisory committee to hasten economic integration, and by Venezuela's decision to join the association.

Outpacing LAFTA, the Central American Common Market (formed in 1960) had eliminated 95% of internal customs duties and had imposed a common external tariff on 98% of the items on regional customs classification. To equalize and stimulate growth within the market, the capitalization of the Central American Bank for Economic Integration was increased by $42 million (of which the United States subscribed $35 million), to a total of $92 million.

Investment. Total U.S. private investment in Latin America amounted to $9 billion in 1965, reflecting a 7% increase since 1961. Latin American private investment in the area stood at $2.4 billion (up 24%). Since 1962, when there was a net drain of U.S. capital from the area, new private investments have increased each year. Several factors accounted for the mounting confidence of private investors: (1) stable regimes prepared to take stern measures against Communist activities; (2) Castro's waning influence; and (3) detailed agreements between the United States and 15 Latin countries, guaranteeing investors against losses from expropriation, currency inconvertibility, war, revolution, or insurrection. The Atlantic Community Development Group for Latin America (ADELA) began operations in 1965 by extending private investments totaling $21.5 million. ADELA is a joint undertaking of more than 120 companies, and has an authorized capitalization of $40 million.

The Inter-American Development Bank authorized 69 loans to Latin American countries in 1964 for economic and social development. The loan commitments totaled nearly $300 million.

Social Development. Favored by sanitation and medical science, the annual Latin American birth rate of 3.5% was expected to increase the total population of 245 million in 1965 to 374 million by 1980. To help meet the danger of overcrowding, unemployment, slums, misery, and violence, the United States has been quietly helping Latin governments, universities, and Roman Catholic groups to undertake population studies, as had been authorized by U.S. foreign aid legislation. The Christian Democratic regime of Chile's President Frei inaugurated the first Latin birth-control program early in 1966. It provides free information and contraceptives to women who request them.

Although 25 million Latin Americans were beneficiaries of the U.S. Food for Peace program, and 14 Latin nations had undertaken land reforms, the per capita diet deficiency (based on a minimum diet established by the UN) increased from 7% in 1961 to 11% in 1965. The Alliance for Progress had constructed 1.5 million new homes in the previous four years (the U.S. had contributed $600 million), but Latin America will need $40 billion for adequate housing in the next five years.

Advances in education and tax collection were more impressive. Since 1961, one million children had been provided with new classrooms, and 10 million textbooks had been made available. Illiteracy had declined from 50% to 43% of the total population. Since 1955 the number of Latin universities had grown from 160 to 196, and student enrollment had increased from 520,000 to 680,000, at an annual rate of 6%. Tax collections were 10% higher in 1964 than in 1961 as the result of reorganized tax structures and collection systems.

By 1965, experience had taught that different emphases were needed for developmental projects. Supplementing low-income housing construction were programs to encourage savings and loans societies (there were 250,000 Latin American depositors in 1965). Teacher training was more needed than new schools. Finally, the importance of rural development had come to be recognized. In addition to land reform, top priority was given to the better use of large acreage, to more extensive use of fertilizers, to new irrigation projects, and to better access to markets. (See also FOREIGN AID; INTERNATIONAL TRADE; and articles on the Latin American countries.)

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LATIN AMERICAN LITERATURE

A major development of recent years is the emergence of the literary prizes of the Casa de las Américas in Havana, based on the findings of panels of judges who include some of the most distinguished literary figures of the Americas. An increasing international awareness of Latin American literature is reflected in the acknowledged influence on recent French literature of writers such as Alejo Carpentier, Jorge Luis Borges, and Julio Cortázar, as well as the serious consideration given to Borges and Miguel Angel Asturias as candidates for the Nobel Prize.

Fiction. The characteristic cosmopolitanism of the Latin American writer today is seen in the work of the Chilean diplomat Jorge Edwards, who lives in Paris. His novel *El peso de la noche,* published in 1965, portrays the failure and frustration within a wealthy family, in an atmosphere of fatalism and decay. The young Argentine Beatriz Guido, in *El incendio y las vísperas,* pursues her line of investigation of Argentine reality in a contemporary novelistic idiom. Another of the younger generation is the Mexican Vicente Leñero, who published *Estudio Q.* He made his literary appearance abruptly in 1964 with *Los albañiles,* which won the Spanish Biblioteca Breve Prize for 1963. Both novels employ modern techniques to probe the reality of apparently restrictive social groups. The Mexican dramatist Luisa Josefina Hernández added to her increasing reputation as a novelist with *La primera batalla.*

The Casa de las Américas short story prize went to the Argentine Jorge Onetti for *Cualquiercosario,* a humorous, often acid vision of the phenomena of everyday existence. The Mexican writer Carlos Fuentes turned to the short story form in *Cantar de ciegos* (1964), which again demonstrates his technical mastery.

Poetry. In recent years there has appeared a group of young poets who have a highly personal colloquial idiom and who angrily reject modern pragmatic values. They include the virtually unknown Argentine poet Víctor García Robles, who received the Casa de las Américas award for *Oíd mortales,* a torrential, almost chaotic expression of his anger. The vehemence and humor of the work do not hide some rhetorical weaknesses, but marked weaknesses and strengths are typical of the school. García Robles is an important new voice in Latin American literature.

Among established poets, Carlos Pellicer received the Mexican National Literature Prize for 1964 for the body of his work. The Venezuelan Prize for 1963–64 went to José Tadeo Arreaza Calatrava for his collected *Poesías* (1964). He is a late modernist who has written little in recent years.

Antonio de Undurraga of Chile reinterpreted the figure of Christ in his highly personal vision, *Jesús el desconocido.* Miguel Otero Silva of Venezuela fused social analysis and the traditional Hispanic preoccupation with death in *La mar que es el morir.* Carlos Medellín, a Colombian, studied the immediacy of life in the traditionally oriented *El aire y las colinas.*

Mexican poetry was well represented in 1965. *Vendimia del juglar* offers Marco Antonio Montes de Oca's dazzling imagery. *Ocupación de la palabra* is a collective volume by the very young group of poets whose first volume was *La espiga amontonada.* José Emilio Pacheco, himself a brilliant young poet, edited the anthology *Poesía mexicana del siglo XIX.*

Theater. Serious drama flourished in Latin America perhaps as never before, although almost entirely outside the realm of professional theater corresponding to Broadway. Latin American plays are frequently staged in Europe; the Cuban Theater Festival is a major event; and there are annual national festivals in virtually all Latin American nations. Uruguay held its first International Theater Festival in December 1964.

The winner of the Casa de las Américas award was the Cuban José Triana's *La noche de los asesinos,* an imaginative investigation of the nature of violence. The play combines technical experimentation with popular expression. Rodolfo Usigli of Mexico, considered by many to be Latin America's finest dramatist, offered a new play that is one of his best, *Corona de luz.* It completes the trilogy begun in 1944 with *Corona de sombra.*

The revelation of the Argentine season was Roberto Cossa, whose *Nuestro fin de semana* brilliantly peels off the superficial calm of a group of families to reveal their hysteria and frustration. Another Argentine, Osvaldo Dragún, had his *Historias para ser contadas* revived in Argentina with great success. It has also been staged throughout Europe and Latin America.

Nonfiction. Jorge Zalamea, a Colombian, received the essay prize of the Casa de las Américas for *La poesía ignorada y olvidada,* an anthological study of popular and archaic poetry. Three distinguished Colombians, Rafael Maya, Cecilia Hernández de Mendoza, and Andrés Holguín, collaborated on *Unamuno en Colombia.* Maya also published *De perfil y de presente,* essays on Colombian literature that reflect both his skill as a critic and his insights as a poet. Giovanni Previtale's *Ricardo Güiraldes, biografía y crítica* is the most complete study of the author of *Don Segundo Sombra.*

Translations. Important translations include Bernal Díaz del Castillo's 16th century chronicle, *The Discovery and Conquest of Mexico,* tr. by A.P.

Maudsley; Calixto Bustamante Carlos' 18th century *El Lazarillo, a Guide for Inexperienced Travelers Between Buenos Aires and Lima,* tr. by Walter D. Kline; Julio Cortázar's novel, *The Winners,* tr. by Elaine Kerrigan; José Donoso's novel, *Coronation,* tr. by Jocasta Goodwin; Alfonso Reyes' *Mexico in a Nutshell and Other Essays,* tr. by Charles Ramsdell; and *Modern Poetry from Spain and Latin America,* ed. and tr. by N. Braymer and L. Lowenfels.

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LATTER-DAY SAINTS. See CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS.

LATVIA. See UNION OF SOVIET SOCIALIST REPUBLICS.

LAW

This article reviews some of the important decisions handed down by the U.S. Supreme Court during the 1964–65 term in the areas of civil rights, business regulation, public utilities, taxation, criminal law, and labor-management relations.

Racial Discrimination. In *Heart of Atlanta Motel, Inc.* v. *United States* (379 U.S. 241), the Supreme Court held that section 201 of the Civil Rights Act of 1964, prohibiting racial discrimination by motels that provide lodging to transient guests, constituted a valid exercise of the federal power to regulate interstate commerce. The decision of *Katzenbach* v. *McClung* (379 U.S. 294) upheld section 201 in its application to restaurants, provided that a substantial portion of the food served has moved in interstate commerce.

In *Cox* v. *Louisiana* (379 U.S. 536), the court reversed the conviction of a civil rights leader under a Louisiana statute prohibiting "disturbing the peace." The statute, interpreted by the Supreme Court of Louisiana as intended to punish public demonstrations protesting segregation and discrimination, was held by the U.S. Supreme Court to be unconstitutionally broad and an infringement of the rights of free speech and assembly. The U.S. Supreme Court also upset the civil rights leader's conviction for violating a state statute barring the obstruction of public passages. In a separate case with the same name (379 U.S. 559), the Supreme Court held that a Louisiana statute barring demonstrations in or near courthouses, if the demonstrations were intended to obstruct justice or influence judicial officials, did not unconstitutionally infringe upon rights of free speech or assembly; but that permission given by police to conduct a demonstration across the street from the courthouse barred conviction of the demonstrator in this case. In *Hamm* v. *Rock Hill* (379 U.S. 306), nonfinal state trespass convictions of Negroes who had participated in sit-in demonstrations at lunch counters were vacated, on the ground that the Civil Rights Act of 1964 abated pending convictions arising out of preenactment activities.

In *Louisiana* v. *United States* (380 U.S. 145), the court invalidated those provisions of the Louisiana Constitution and those statutes that required prospective voters to satisfy registrars of their ability to understand and give a reasonable interpretation of any provision of the state or federal Constitution. The constitutional provisions and statutes in question violated the prohibitions against discrimination in voting because of race, found both in the 15th Amendment of the U.S. Constitution and in the Civil Rights Act of 1964. The statutes also violated the 14th Amendment. In *United States* v. *Mississippi* (380 U.S. 128), the court held that a complaint by the attorney general of the United States under the Civil Rights Act, challenging state laws and constitutional provisions allegedly used to keep Negroes from voting, had been erroneously dismissed by a three-judge federal court. It was ordered that the case be tried without delay.

In *McLaughlin* v. *Florida* (379 U.S. 184), a Florida statute banning habitual nighttime cohabitation between whites and Negroes was held to be unconstitutional because it denied the equal protection of the laws guaranteed by the 14th Amendment. The court expressly avoided passing on the validity of a Florida law banning interracial marriages. In *Swain* v. *Alabama* (380 U.S. 202), a state prosecutor's exercise of peremptory challenges to exclude all Negroes from a jury trying a Negro defendant in

UPI

THURGOOD MARSHALL (left), sworn in as U.S. solicitor general on August 24, introduces family to the president.

THURGOOD MARSHALL became solicitor general of the United States in 1965. His office handles all federal appeals before the Supreme Court. Marshall had been a judge on the U.S. Court of Appeals for the Second Circuit (New York) since 1962. Before that, he had appeared many times before the U.S. Supreme Court as an attorney for the National Association for the Advancement of Colored People. His most famous case was *Brown* v. *Board of Education* (1954), in which the Supreme Court declared unconstitutional deliberate racial segregation in public schools.

Marshall was born in Baltimore, Md., on July 2, 1908. He graduated from the law school of Howard University in 1933 and was admitted to the Maryland bar that year. He has fought hard for civil rights ever since he became an attorney for the NAACP in 1936. Although known as a "tough" liberal, he is cool and informal. After the death of his first wife, Marshall married Cecilia S. Suyat in 1955. They have two sons, Thurgood and John.

a criminal case was held not to violate the equal protection clause. Furthermore, the court did not believe that a showing that Negroes had not served on juries in a particular county during a specified period of time gave rise to the inference of systematic discrimination on the part of the state, in the absence of sufficient showing of the prosecution's participation.

Freedom of Religion, Speech, Press, and Information. In *Freedman* v. *Maryland* (380 U.S. 51), the Supreme Court decided that portions of the Maryland motion picture censorship statute violated the 1st Amendment's guarantee of freedom of expression. The unconstitutional provision of the statute required that a film be submitted to censors before being shown, placed the burden of instituting judicial proceedings upon the exhibitor if the censors disapproved a film, allowed conviction of an exhibitor for showing a banned film even though no court had ever ruled on the obscenity of the film, and provided no assurance of prompt judicial determination.

United States v. *Seeger* (380 U.S. 163) involved claims of conscientious objectors under the Universal Military Training and Service Act, which exempts from combatant training and service those persons who, by reason of their religious training and belief, are conscientiously opposed to participation in war in any form. Construing the act's phrase "belief in a relation to a Supreme Being," the court concluded that the proper test "is whether a given belief that is sincere and meaningful occupies a place in the life of its possessor parallel to that filled by the orthodox belief in God of one who clearly qualifies for the exemption."

In *Lamont* v. *Postmaster General* (381 U.S. 301), the court declared invalid a provision of the Postal Service and Federal Employees Salary Act of 1962, under which the postmaster general was authorized to detain foreign mail deemed to be "Communist political propaganda." The mail could be detained until the addressee submitted a request in writing for its delivery. The provision was an unconstitutional abridgement of the addressee's rights under the 1st Amendment, which guarantees freedom of speech and press.

In *Zemel* v. *Rusk* (391 U.S. 1), it was held that neither the right to information, under the 1st Amendment, nor the right to travel, under the due process clause of the 5th Amendment, was violated by the refusal of the U.S. secretary of state to validate a passport for travel to Cuba. Citing a long history of "area restrictions" in the issuance of passports, the court said that the secretary "has justifiably concluded that travel to Cuba by American citizens might involve the nation in dangerous international incidents, and that the Constitution does not require him to validate passports for such travel."

Poll Tax. *Harman* v. *Forssenius* (380 U.S. 528) was the first case decided by the Supreme Court under the 24th Amendment, which protects voters in federal elections from disfranchisement because of failure to pay a poll tax. The court invalidated a section of the Virginia Code which provided that, in order to qualify to vote in federal elections, one must either pay a poll tax or file a witnessed or notarized certificate of residence. The court reasoned that the Virginia law "imposes a material requirement solely upon those who refuse to surrender their constitutional right to vote in federal elections without paying a poll tax" and "unquestionably erects a real obstacle to voting in federal elections for those who assert their constitutional exemption from the poll tax."

Subversive Activities. On November 15, in the second month of the 1965–66 term, the court held unenforceable a Justice Department order requiring two individuals to register as members of the Communist party under the Subversive Activities Control Act of 1950. Noting that registration would expose them to prosecution under other federal laws "in an area permeated with criminal statutes," the court upheld the individual's right to avoid possible self-incrimination by invoking the 5th Amendment of the U.S. Constitution. The opinion did not deal with another provision of the act, requiring the Communist party itself to register and list its membership.

In *Dombrowski* v. *Pfister* (380 U.S. 479), decided in the previous term, the court held that a Louisiana statute punishing membership in "subversive organizations" was an unconstitutional abridgement of free expression, in violation of the due process clause of the 14th Amendment, because of the overly broad definition of such organizations.

Birth Control. In *Griswold* v. *Connecticut* (381 U.S. 479) the Connecticut birth control statute that banned the use of contraceptives and the giving of medical advice as to their use was held to be unconstitutional on the ground that it violated a right of marital privacy emanating from the 1st, 3rd, 4th, 5th, 9th, and 14th Amendments.

Voting Residence. In *Carrington* v. *Rash* (380 U.S. 89), a Texas constitutional provision preventing a member of the armed forces from ever acquiring a voting residence in Texas as long as he remained in the service was held to violate the equal protection clause of the 14th Amendment. The court, in rejecting the state's argument that its voting ban was justified because of the transient nature of service in the armed forces, pointed out that there had been many cases involving persons other than military personnel where the local elections officials had determined the issue of bona fide residence.

Business Regulation. The Supreme Court held in *Federal Trade Commission* v. *Consolidated Foods Corp.* (380 U.S. 592) that Consolidated's acquisition of a company manufacturing dehydrated onion and garlic was a violation of section 7 of the Clayton Act if the probability of lessening competition was proved. Food processors that sold to Consolidated, a wholesale and retail grocery corporation, were found to have given their onion and garlic business to the manufacturer acquired by Consolidated, so that Consolidated would be encouraged to buy grocery products from them.

In *Atlantic Refining Co.* v. *Federal Trade Commission* (381 U.S. 357), the Supreme Court ruled that a large oil company was engaged in unfair competition by carrying on a campaign, under a commission agreement, to force its dealers to buy a specific tire manufacturer's products. The oil company was violating section 5 of the Federal Trade Commission Act. The court decided that the commission was justified in banning any such agreements by the oil company or the tire manufacturer. In *Federal Trade Commission* v. *Colgate-Palmolive Co.* (380 U.S. 374) the court found a violation of section 5 constituting a deceptive trade practice. A televised mockup test that was not identified to viewers as a mockup purported to be visible proof of a product claim. The advertising was held to be illegal even if the product claim was true.

In *United States* v. *Boston & Maine R.R.* (380 U.S. 157), the court found that the receipt of bribes by officials of the railroad from a railway equipment purchasing corporation did not constitute a "substantial interest in" the corporation, so as to make the criminal provisions of section 10 of the Clayton Act applicable. Construing the statutory language strictly, the court said that the words "substantial interest in" presupposed either an existing investment of some kind in the purchaser, or the creation of the purchaser by the individual defendants for their use, or a joint venture or continued course of dealings—licit or illicit—with the purchaser for profit sharing.

Transportation and Public Utilities. Three cases decided by the Supreme Court involved the jurisdiction of the Federal Power Commission. In *United Gas Improvement Co.* v. *Continental Oil Co.* (381 U.S. 392), the court decided that the commission had jurisdiction over sales to an interstate pipeline company of leases covering proved and substantially developed gas reserves to be sold in interstate commerce. It was held that the "production and gathering" exemption of section 1(b) of the Natural Gas Act did not deprive the commission of jurisdiction over such sales even though they occurred before production and gathering had ended.

In *California* v. *Lo-Vaca Gathering Co.* (379 U.S. 366), gas was delivered by a seller in Texas to an interstate natural gas pipeline company, pursuant to "restricted use" agreements which provided that the gas was not for resale but that it would be commingled with other gas being transported in the purchaser's pipeline system. As it was conceded that at least a portion of the gas would in fact be resold outside of Texas, the court held that the commission had jurisdiction over the transaction at the outset, under section 1(b) of the act.

In *Federal Power Commission* v. *Union Electric Co.* (381 U.S. 90), the court held that the construction of a pumped storage hydroelectric project, generating energy for interstate transmission and utilizing nonnavigable headwaters of a navigable river, would affect the "interests of interstate or foreign commerce"; and that therefore section 23(b) of the Federal Power Act required a license from the commission for such construction.

Taxation. In *Paragon Jewel Coal Company, Inc.* v. *Commissioner of Internal Revenue* (380 U.S. 624), the Supreme Court decided that coal mine operators who mined under contracts with the lessee of coal lands did not acquire an "economic interest" in the coal in place, and therefore were not entitled to an allowance for percentage depletion, even though they had invested time and money in developing mines and had asserted a right to mine particular areas to exhaustion. The court based its decision on *Parsons* v. *Smith* (359 U.S. 215), which held in 1959 that the deduction for depletion is allowed in recognition of the fact that mineral deposits are wasting assets, and that the deduction is intended as compensation to the owner for the part used in production.

In *United States* v. *Midland-Ross Corp.* (381 U.S. 54) and *Dixon* v. *United States* (381 U.S. 68), realization of original issue discount on the sale of noninterest-bearing promissory notes (which had been bought from the issuers at prices discounted below the face amounts) was held to be ordinary income, rather than capital gain, which is subject to tax at a lower rate. In *Dixon*, the court expressly rejected the contention that the commissioner of internal revenue could not retroactively withdraw an acquiescence in a tax court decision, relied on by the taxpayer, which would have required treating the gain realized on the sale of the notes as capital gain.

On the other hand, in *Commissioner of Internal Revenue* v. *Brown* (380 U.S. 563), the court decided that taxpayers realized capital gain, not ordinary income, on the sale of their stock in a business corporation to a tax-exempt organization which agreed to pay for the stock within ten years out of earnings realized from the assets of the business corporation. The court disagreed with the government's argument that, because the entire risk of the transaction remained on the sellers, the transaction was not (for tax purposes) a "sale or exchange."

Construing the Life Insurance Company Income Tax Act of 1959 in *United States* v. *Atlas Life Insurance Co.* (381 U.S. 233), the court upheld the taxation of municipal bond interest received by the insurance company. The company had allocated the bond interest earnings between tax-exempt policyholder reserves and taxable company reserves.

In *Commissioner of Internal Revenue* v. *Noel's Estate* (380 U.S. 678), flight accident insurance was held to be "life insurance" for federal estate tax purposes, and therefore includable in the insured's gross estate. The court emphasized, however, that it was possible for a policyholder to divest himself of all incidents of ownership over his insurance policies by a proper gift or assignment, so as to bar their inclusion in his gross estate; but that no such transfer of the policies was made in this case.

The Supreme Court invalidated the imposition of an excise tax by the state of Idaho upon an Idaho-licensed motor fuels dealer who sold and transferred gasoline in Utah for importation into Idaho by an agency of the federal government. The tax was held, in *American Oil Co.* v. *Neill* (380 U.S. 451), to violate the due process clause of the 14th Amendment, because the out-of-state vendor, though licensed to do local business in Idaho, showed clearly that there were no in-state activities connected with its out-of-state sales. In *General Motors Corp.* v. *District of Columbia* (380 U.S. 553), the court decided that the use of sales within the District of Columbia as the sole factor for determining how much of a corporation's net income was "fairly attributable" to the district for purposes of computing the franchise tax was unauthorized by the language of the District of Columbia Income and Franchise Tax Act of 1947.

Criminal Law. In *Douglas* v. *Alabama* (380 U.S. 415) and *Pointer* v. *Texas* (380 U.S. 400), the right of an accused person "to be confronted with the witnesses against him," as guaranteed by the 6th Amendment of the U.S. Constitution, was held to be mandatory as to prosecutions in state courts. Both cases involved the use of transcripts of statements by persons other than the accused, under circumstances in which the accused was not accorded the right of cross-examination. In *Griffin* v. *California* (380 U.S. 609), the court decided that in a criminal prosecution in a state court the 5th Amendment's protection against self-incrimination prohibited both comment by the prosecution on the failure of the accused to testify, and instructions by the court to the jury that such silence was evidence of guilt.

In *Estes* v. *Texas* (381 U.S. 532), the televising of a "notorious" state criminal trial, over the objection of the defendant, was held to violate the due process clause of the 14th Amendment. The case involved a charge of swindling brought against Billie Sol Estes, who was characterized in a concurring opinion by Chief Justice Warren as "a much publicized financier."

The decisions in *Linkletter* v. *Walker* (381 U.S. 618) and *Angelet* v. *Fay* (381 U.S. 654) limited the rule of *Mapp* v. *Ohio* (367 U.S. 654), which in 1961 had applied the federal exclusionary rule to state convictions based on illegally seized evidence. The rule was held not to be retrospectively applicable to cases finally decided in the period prior to the *Mapp* decision.

Labor Law. In *United Mine Workers of America* v. *Pennington* (381 U.S. 657), the court held that a conspiracy between the union and a group of large coal companies to impose an agreed-upon wage and royalty scale upon smaller nonunion operators, regardless of their ability to pay and with the purpose of eliminating them from the industry, was not exempt from the Sherman Act, if the conspiracy was proved. However, concerted activity by the union and the large operators to influence the secretary of labor in making minimum wage determinations, and the Tennessee Valley Authority in making coal purchases, was held not to violate the antitrust laws, even though it was intended to eliminate competition.

Meat Cutters Local 189 v. *Jewel Tea Co.* (381 U.S. 676) also involved the impact of the antitrust laws on union activities. The court decided that a restriction of the marketing hours of food store meat departments, obtained through bona fide "arm's length" bargaining and not in combination with nonlabor groups, fell within the protection of the national labor policy and therefore was exempt from the Sherman Act.

In *Textile Workers* v. *Darlington Manufacturing Co.* (380 U.S. 263), the court held that if an employer closed his entire business, even if the liquidation was motivated by vindictiveness towards the union, such action would not be an unfair labor practice in violation of the Taft-Hartley Act. A partial closing, on the other hand, would be an unfair labor practice under section 8(a)(3) of the act "if motivated by a purpose to chill unionism in any of the remaining plants of the single employer and if the employer may reasonably have foreseen that such closing will likely have that effect." Since the National Labor Relations Board (NLRB) had found that the employer in question was part of a larger single enterprise controlled by the members of one family, but had not made findings as to the employer's motivation, the Supreme Court remanded the case to the court of appeals and the NLRB for further proceedings.

The Supreme Court decided, in *Fibreboard Paper Products Corp.* v. *National Labor Relations Board* (379 U.S. 203), that an employer's refusal to bargain over "contracting out," for legitimate business reasons, of maintenance work formerly performed by employees in a bargaining unit, violated section 8(a)(5) of the Taft-Hartley Act. That section makes it an unfair labor practice for an employer to refuse to bargain collectively with the representatives of his employees. The court also held that the NLRB could order resumption of the discontinued activities and reinstatement (with back pay) of the affected employees.

In *American Ship Building Co.* v. *National Labor Relations Board* (380 U.S. 300), it was held that an employer's use of a lockout, after a bargaining impasse had been reached, solely to bring economic pressure to bear in support of its bargaining position, did not constitute an unfair labor practice under either section 8(a)(1) or section 8(a)(3) of the Taft-Hartley Act. In *National Labor Relations Board* v. *Brown* (380 U.S. 278), the court similarly failed to find a violation of either of these statutory provisions. Nonstruck members of a multiemployer bargaining unit, in response to a whipsaw strike against a member able to continue operations with temporary replacements, had locked out union employees and also had continued operations with temporary replacements.

In *Railway Clerks* v. *Employees Association* (380 U.S. 650), the court decided (1) that ballots used by the National Mediation Board in elections conducted under the Railway Labor Act were not required to provide a space in which employees could cast a "no union" vote, (2) that the board's sufficient investigation of a representation dispute barred judicial review of its determination of the appropriate craft or class in which a representation election should be held, and (3) that the employer was not entitled to be a party to proceedings by which the board determined the appropriate unit.

In *Republic Steel Corp.* v. *Maddox* (379 U.S. 650), it was held that a breach-of-contract suit in a state court for severance pay allegedly owed under the terms of a collective bargaining agreement was barred where the individual employee who brought the suit had not first attempted to use the contract grievance procedure agreed upon by the employer and the union as the exclusive mode of redress.

The constitutionality of section 504 of the Landrum-Griffin Act, which makes it a crime for a member of the Communist party to serve as an officer of a labor union, was involved in *United States* v. *Brown* (381 U.S. 437). The court held that this provision was an unconstitutional bill of attainder, prohibited by Article I, section 9, of the Constitution of the United States.

(See also INTERNATIONAL LAW.)

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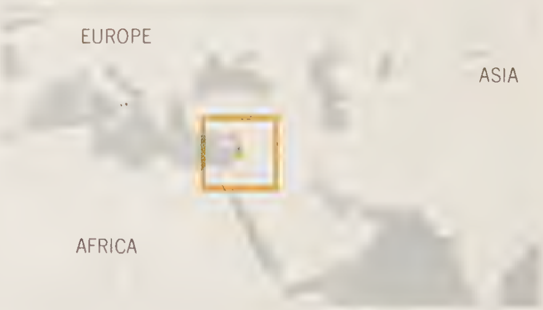
LEBANON



The fall of the cabinet of Premier Hussein Oueini and the return to power of former Premier Rashid Karami was the major political event in Lebanon in 1965. General prosperity in the business community continued, but a shortage of money forced the government to cut expenditures on public works. Relations with Israel deteriorated.

The Cabinet Crisis. Early in 1965 the coalition cabinet of Premier Oueini, as reorganized in November 1964, was increasingly rent by dissension. On June 2, Foreign Minister Philippe Takla resigned.

Early in July the government was attacked bitterly in the Chamber of Deputies. Though Premier Oueini secured a vote of confidence on July 20, he submitted his resignation to President Charles Helou a few hours later. On July 22 the president named Karami premier. Karami, who had headed the cabinets that restored peace to the country after the civil disturbances of 1958, tried to form a "government of national union" drawn from all parties in the Chamber of Deputies. He failed, but on July 25 he announced the formation of a 10-member cabinet, composed largely of experts and technicians who were drawn entirely from outside Parliament.

Economic Developments. The Lebanese economy, heavily dependent on commerce, banking, and tourism, was generally prosperous during 1965. Late in 1964 and early in 1965, political developments in Syria, Saudi Arabia, and Kuwait caused some $150 million to seek security in Lebanese banks. On Jan. 1, 1965, the unrealistic (and seldom used) official exchange rate of £L2.2 to the U.S. dollar was adjusted to the free market rate of £L3.08.

A new national development plan for 1965–70, considerably revised from the draft projects of 1963 and 1964, was inaugurated on May 1 with an estimated total cost of £L3 billion. Projected expenditures for public works in 1965 were cut by £L19 million, and the government indicated that extensive foreign aid would be necessary to finance the new program. On April 27 a 9.9-mile tunnel in the Litani River development project was completed. The tunnel will divert water to irrigate the western slopes of the Lebanon Mountains and to operate the 91,250-kilowatt Awali power station.

Lebanon delayed joining the Arab Common Market, established on Jan. 1, 1965, by the United Arab Republic, Syria, Jordan, Iraq, and Kuwait, pending assurances that it would not become a stepping-stone to some supranational union in which Lebanese sovereignty might be endangered. On May 21, Beirut signed a three-year agreement on trade and technical cooperation with the European Economic Community (EEC); Lebanon and the European states granted each other most-favored-nation treatment, and the EEC states agreed to expand and coordinate their technical aid to Lebanon.

WIDE WORLD

LEBANESE PRESIDENT Charles Helou (left center) greets King Hassan II of Morocco at an Arab summit meeting in Casablanca on September 15. At far left is Sheikh Abdullah al-Salem al-Sabah, the amir of Kuwait, who died November 24.

LEBANON · Information Highlights

Area: 4,015 square miles.
Population: 2,250,000 (mid-1964 est.).
Chief Cities (1963 est.): Beirut, the capital, 500,000; Tripoli, 145,000.
Government: *President*—Charles Helou; *Prime Minister*—Rashid Karami; *Parliament*—Chamber of Deputies, 99 members; party seating (1965; by religious apportionment): Maronite, 30; Sunnite, 20; Shi'ite, 19; Greek Orthodox, 11; Greek Catholic, 6; Druse, 6; Armenian Orthodox, 4; Armenian Catholic, 1; Protestant, 1; and minorities, 1.
Religious Faiths: Christians, 50%; Muslims, 40%.
Education: *Literacy rate*—75% of population. *Total school enrollment* (1962)—358,214 (primary, 246,758; secondary, 98,461; teacher-training, 769; technical, 961; higher, 11,265).
Finance (1964 est.): *Revenues,* $128,000,000; *expenditures,* $155,000,000; *monetary unit,* Lebanese pound (3.08 pounds equal U.S.$1.).
Economic Index: *Cost of living* (1963), 110 (1958=100).
Manufacturing (metric tons): Cement (1964), 897,000; gasoline (1963), 162,000; meat (1963), 59,000; olive oil (1964), 5,000; sugar (1963), 4,000; wine (1964), 4,000.
Crops (metric tons, 1964): Citrus fruits, 203,000; apples, 123,000; grapes, 100,000; wheat, 60,000; tomatoes, 42,000; dry onions, 44,000; bananas, 22,000; olives, 30,000; figs, 24,000.
Minerals (metric tons, 1964): Lime, 26,000; salt, 20,000; iron ore (1960), 8,100.
Foreign Trade (1964): *Exports,* $67,900,000 (chief exports, 1962: apples, pears, quinces, $5,200,000; dried beans, $3,600,000; wool in lump, $2,200,000; tobacco, $2,100,000); *imports,* $431,300,000 (chief imports, 1962: livestock, $13,200,000; automobiles, $10,400,000; wheat and maslin, $10,400,000). *Chief trading partners* (1962): Syria (took 15% of exports, supplied 10% of imports); Britain (took 4% of exports, supplied 20% of imports); U.S. (took 5% of exports, supplied 18% of imports).
Transportation: *Roads* (1964), 4,350 miles (3,107 paved); *motor vehicles* (1964), 96,241 (automobiles, 83,957); *railways* (1963), 208 miles; *merchant vessels* (1964), 165 (849,000 gross registered tons); *national airlines,* Air Liban, Lebanese International Airways, Trans-Mediteranean Airways, Lebanese Air Transport; *principal airport,* Beirut.
Communications: *Telephones* (1964): 95,000; *television stations* (1964), 5; *television sets* (1964), 120,000; *radios* (1964), 250,000; *newspapers* (1962), 44.

Foreign Affairs. Tension between Lebanon and Israel increased in 1965. Al Fatah, a Palestine Arab refugee organization, conducted raids across the Israeli frontiers. Israel reported three raids, and in retaliation Israeli army units attacked two Lebanese border villages on October 28, destroying a house and three water reservoirs.

Arab states continued efforts to deny Israel use of the Jordan River. On January 22 the Lebanese parliament approved Arab League plans for a pumping station at the Wazzani springs to divert water into Syria's Baniyas River and from there into Jordan's Yarmuk River. Parliament also approved a plan to dam the upper Hasbani River and divert its waters into the Litani. The Chamber of Deputies gave the cabinet limited authority to permit troops from other Arab countries to enter Lebanon, if necessary, to protect the diversionary works against Israeli attack. On January 23, Israel warned of possible punitive action. Though work was begun on the Wazzani project, the Lebanese government evinced considerable reluctance to provoke Israel.

On March 16, rioters in Beirut and Tripoli protested West Germany's decision to exchange ambassadors with Israel. On May 13, Lebanon severed diplomatic relations with Bonn.

Early in May, President Helou paid official visits to the United Arab Republic, France, Italy, and the Vatican. In September he represented Lebanon at the third Arab summit conference in Casablanca.

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LEE KUAN YEW. See biographical sketch under SINGAPORE.

LEEWARD ISLANDS. See COMMONWEALTH OF NATIONS.

LEGISLATION. See UNITED STATES; and articles on the states and countries.

LEONOV, Aleksei A. See biographical sketch under SPACE EXPLORATION.

LIBERIA

ASIA
AFRICA
S. AMERICA

LIBERIA · Information Highlights

Area: 43,000 square miles.

Population: 1,066,000 (April 1965 est.).

Chief City (1962 census): Monrovia, the capital, 80,922.

Government: *President*—William V.S. Tubman (took office Jan. 1, 1944); *Vice President*—William R. Tolbert. *Legislature*—Senate, 18 members; House of Representatives, 47 members; party seating (1965), all members of the True Whig party.

Religious Faiths: Protestants, 70% of population; Roman Catholics, 1%; others, 29%.

Education: *Literacy rate* (1962)—9% of population aged 15 and over. *Total school enrollment* (1962–63)—80,321.

Finance (1963–64 est.): *Revenues,* $39,000,000; *expenditures,* $42,500,000; *monetary unit,* Liberian dollar (equals U.S.$1).

Gross National Product (1962): $136,000,000.

Crops (metric tons, 1963–64 crop year): Rubber, 42,600 (ranks 8th among world producers); palm kernels, 9,000.

Minerals (1964): Iron ore, 10,456,000 metric tons (ranks 12th among world producers); gem diamonds (exports), 298,000 carats (world rank, 6th); gold, 1,824 troy ounces.

Foreign Trade (1963): *Exports,* $81,110,000 (chief exports, 1962: iron ore and concentrates, $32,398,000; natural rubber and gums, $25,662,000; uncut gem diamonds, $3,055,000; industrial diamonds, $1,502,000); *imports,* $106,940,000 (chief imports, 1962: construction and mining machinery, $9,345,000; railroad rails, $5,311,000; buses and trucks, $3,927,000). *Chief trading partners* (1961): U.S. (took 46% of exports, supplied 49% of imports); Netherlands (took 22% of exports, supplied 6% of imports); Britain (took 9% of exports, supplied 12% of imports).

Transportation: *Roads* (1964), 1,880 miles (250 paved); *motor vehicles* (1964), 11,250 (automobiles, 8,100); *railways* (1963), 210 miles; *merchant vessels* (1964), 1,151 (15,717,000 gross registered tons); *national airline,* Liberian National Airways; *principal airport,* Robertsfield.

Communications: *Telephones* (1964): 2,800; *television station* (1964), 1; *television sets* (1964), 2,000; *radios* (1963), 100,000; *newspaper* (1963), 1 (daily circulation, 3,000).

There were no major departures in 1965 from the economic and political policies that have been followed by Liberia's President William V.S. Tubman. The country was concerned with developing its iron ore deposits, and with maintaining a moderate position in African and world affairs.

Economy. An emphasis on collecting revenues, which reached a record total of nearly $40 million in 1964, indicated that efforts to improve Liberia's economic situation were being continued. President Tubman warned the chiefs of Maryland County that they would be given heavy fines and eventually be dismissed unless rice production in the region rose rapidly. The major economic hope, however, was increased production and export of Liberia's extremely rich iron ore. Exports of ore in 1964 enabled the country to achieve its first favorable trade balance since 1961.

The flow of foreign investments to Liberia accelerated somewhat in 1965, particularly in the form of construction equipment and processing plants for minerals. The International Monetary Fund once again helped Liberia balance its external debt, and the World Bank increased the size of an earlier loan for road construction and maintenance.

On June 9 the Liberian American-Swedish Mineral Company announced plans to construct jointly a $51.5 million iron ore washing and pelletizing plant at Buchanan. On the other hand, Liberia's only shoe factory was reported to be in the process of liquidation as the result of massive imports of shoes from China.

Politics. President Tubman, who in 1965 at the age of 70 was in the midst of his fifth four-year term, declared at the end of 1964 that it was no longer necessary to reserve senatorial seats for the lesser-developed regions of the counties. He gave as the reason the substantial progress resulting from his long-term policy of national unification.

A number of internal adjustments, indicated by changes in government personnel, took place in 1965. A.B. Cassell, the commissioner for immigration and nationalization and the deputy attorney general, was replaced. The minister of education, John Mitchell, and the minister of agriculture, Stephen Tolbert, were dismissed from office by President Tubman for "administrative reasons." They were replaced by Augustus Caine and John Cooper, respectively. The army chief of staff, Maj. Gen. Albert White, was replaced by U.S.-trained Lt. Col. George T. Washington of the Liberian National Guard.

In July, President Tubman pardoned three political opponents, Raymond Horace, Thomas Botoe, and T.W. Thompson, all of whom had been sentenced to life imprisonment in 1955 for plotting his assassination. He also pardoned another politician, Frederick Keylor, who had been imprisoned in 1951 on charges of sedition. In September the Women of the National Liberian Social and Political Movement demonstrated in support of President Tubman's nomination for a sixth term.

Foreign Relations. Liberia continued to demonstrate its interest in regional African cooperation, while taking a moderate stand on most international issues. On February 17 in Monrovia, Liberian representatives met with delegates from Sierra Leone, Guinea, and Ivory Coast to discuss the possibility of creating a West African free trade area. The participating nations signed an agreement establishing the West African Interim Organization for Economic Cooperation to investigate the creation of such a free trade area. A ministerial working commission discussed the issue further in May at Freetown, Sierra Leone. The commission, on May 21 in Monrovia, elected Donald George, of Sierra Leone's Ministry of External Affairs, as administrative secretary of the organization.

President Tubman appealed to Ghana and the countries of the Conseil d'Entente (Dahomey, Ivory Coast, Upper Volta, and Niger) to resolve their conflict over the Entente's charge that Ghana serves as a refuge for seditious groups from other African nations. On Liberia's Independence Day (July 26), President Tubman urged African nations to uphold the charter of the Organization of African Unity and not to encourage subversion and coups d'état among their neighbors.

Liberia signed several international agreements in 1965. On March 5 it signed an agreement with Italy for scientific and technical aid. An air service agreement with Belgium was signed on May 2.

The U.S. Agency for International Development announced on July 8 that it was granting a $7.2 million loan to improve Monrovia's sewerage system.

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ELIOTT PHOTOS

PARAMUS (NEW JERSEY) FREE PUBLIC LIBRARY was awarded the $5,000 Book-of-the-Month Club Library Award for 1965. The annual award, given in memory of Dorothy Canfield Fisher, honors small town libraries with outstanding programs.

LIBRARIES

Action taken by President Johnson and Congress made 1965 a banner year for American libraries. In a special message to Congress on education on January 12, the president recommended that federal grants be used for the purchase of books for school libraries, for building school libraries, for the purchase of library materials to strengthen college teaching and research, and for training school, college, and community librarians. Congress later passed several acts with provisions that followed the president's recommendations.

Federal Legislation. The Higher Education Act of 1965 was passed by Congress on October 20. Title II of the act authorized federal grants of $70 million annually for a five-year period for college library assistance. Colleges and universities would use the money to buy books and library materials, pay the cost of courses to train students in librarianship, and establish fellowships. The Library of Congress also will receive part of the funds for a cooperative cataloging program. In addition, the act allows grants for research relating to the improvement of libraries and training in librarianship. Congress, however, did not appropriate funds to implement Title II of The Higher Education Act before it adjourned.

The Elementary and Secondary Education Act of 1965 was signed on April 11, 1965. Title II of the act recognized that teaching programs at all levels of education have become increasingly dependent on effective school library materials and services. Stressing the need for high-quality school libraries, Title II provided that school library resources, textbooks, and other printed and published instructional materials should be readily available for the use of children and teachers in all public and private schools that provide state-approved elementary and secondary education.

Although the act did not call for matching state or local funds, it required that federal funds be used to supplement state and local funds, not supplant them. State plans would determine how the money would be spent, and all funds would be administered by state authorities.

The U.S. Department of Health, Education, and Welfare Supplemental Appropriations Act included funds of $100 million for school library resources, and of $17 million to strengthen state education departments.

The Appalachian Regional Development Act of 1965 provided additional funds for programs operating under the Library Services and Construction Act (LSCA), the Vocational Education Act, and the Higher Education Facilities Act. Libraries receive aid under all these acts.

The Medical Library Assistance Act of 1965 authorized annual allocations totaling $23 million to be used for building medical libraries; for traineeships, research, and development of new techniques in medical library science; for purchasing and processing books; for establishing regional libraries and branches of the National Library of Medicine; and for support of biomedical scientific publications. However, Congress did not appropriate implementing funds for the act in 1965.

Under the National Defense Education Act, as amended (Title XI), 26 colleges were enabled to offer study institutes for school librarians. All participating librarians receive stipends of $75 per week, plus $15 a week for eligible dependents. The institutes provide more extensive training for both librarians with degrees in library science and those with only a few hours of library education. (See also Education.)

School Libraries. The attention of educators, parents, and Congressmen was focused on school libraries in 1965. As a result, the sad state of many school libraries became apparent, and efforts were made to bring them up to the requirements of national standards. As evidence of this effort, all federal legislation of 1965 that related to schools included provisions for library materials or for training librarians.

One instance of the improvement of school library services was the increase in the number of state and local school library supervisors. Six states appointed school library supervisors for the first time in 1965, bringing the total to 41 states with such positions. With the addition of assistant supervisors, there were 74 school library supervisors at the state level. The number of local school library supervisors increased from 592 in 1963–64 to approximately 853 in 1965–66.

There was also an increase generally in the number of professional library positions. New York City alone registered an increase of 223 for the 1965–66 school year, bringing to 597 the number of library positions created there within the past four years.

Another evidence of the increased interest in school libraries included an increase in the number of articles on the subject in the mass-media magazines and professional educational journals. In another development, the International Paper Co., in cooperation with the American Association of School Librarians, prepared a kit for the use of parent and teacher groups who wished to promote the establishment of new school libraries.

In spite of current interest, school libraries still had a long way to go to meet national standards. According to the U.S. Office of Education, school libraries in the United States had 192,200,000 volumes in 1965, but needed 223,400,000 more. Buying and processing the additional volumes would cost $1,244 million. The Office of Education statistics also indicated that there were 25,000 public school librarians, but that 87,000 more were needed, for which $522 million would be required annually to pay the additional salaries. Furthermore, $106,600,000 would be needed each year to keep the book collections up to date. Under present conditions, and with current appropriations, states will not be able to bring school libraries up to the national standards within five years.

College and University Libraries. Statistics for college and university libraries for the 1963–64 school year were published by the U.S. Office of Education in 1965. The 2,140 college and university libraries in the United States had 228,000,000 volumes, and served 4,800,000 students, for an average of 47.5 volumes per student. The libraries' operating expenditures totaled $229,000,000, or $47.70 per student. This represented 3.5% of the total college and university budget for education and general expenditures, or 1.5% less than the recommended standard. There were 11,500 professional personnel employed, or one librarian for each 401 students. Although the number of volumes in book collections and the size of professional staffs have increased each year since 1959–60, the number of students has increased at a greater rate. As a result, the per-student figures, which represent the library's ability to give service, have decreased. Recent increases in federal spending for higher education should be reflected by an improvement in the 1966–67 statistics.

In an effort to make the vast amount of library material more readily available to researchers, a new center for documentation and information retrieval was established at the University of Minnesota. At Syracuse University's Adult Education Center, a Model Information Center was established.

Public Libraries. *Statistics of Public Libraries 1962, Part I,* published by the U.S. Office of Education in 1965, was the first statistical study to be published for public libraries since 1955–56. The study presents data for 860 public libraries in the United States, each serving communities of 35,000 persons or more, out of a total of 7,257 public libraries. The combined population served was 117,984,000. These 860 libraries spent $252,929,488 for operating expenses in 1962, or $2.14 per capita, and $18,772,249 for building sites and construction. (Of the total amount, $225,119,650 came from local appropriations.) They added 12,864,314 volumes in 1962, making a total of 163,268,546 volumes available to their users. The total circulation of books, periodicals, and audio-visual materials was 523,959,597, or 4.44 items per capita, compared with 4.04 items per capita in 1960.

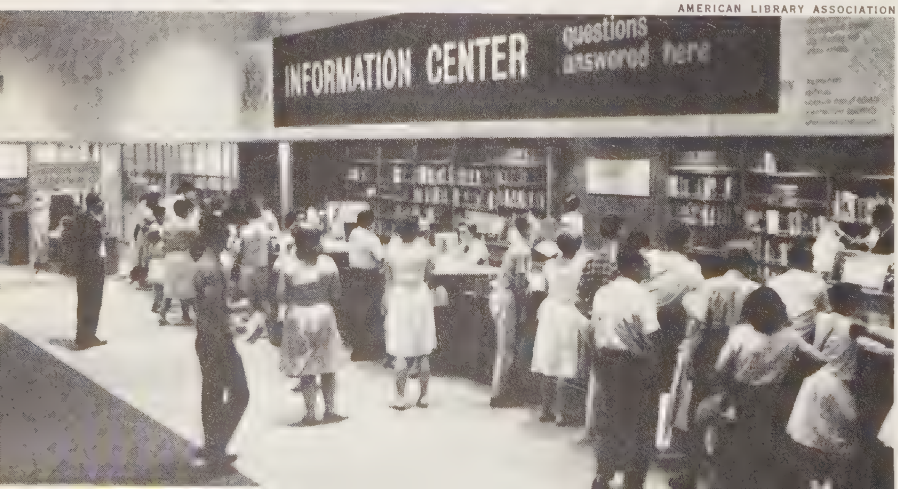
The Book-of-the-Month Club Dorothy Canfield Fisher Library Award of $5,000 was presented to Paramus (N.J.) Public Library for its progressive library program.

War on Poverty Projects. Public libraries in many communities cooperated with local agencies to begin Project Head Start for underprivileged pre-school children. The libraries prepared book lists, furnished classroom space, and initiated storytelling and other cultural programs. Libraries also took part in the federal "war on poverty" program. For example, the Chicago Public Library prepared and distributed a packet of eight book lists, entitled "Up by the Bookstraps," to inform persons interested in the federal programs against poverty, to aid individuals working with underprivileged children, and to help the unemployed. Public libraries also worked with adults having reading difficulties by furnishing lists of adult books with simple vocabularies. Some public libraries started programs that were later taken over by social agencies.

Special Libraries. The Library of Congress, with the cooperation of the Bureau of the Budget, established a Federal Library Committee to improve coordination and planning among the research libraries of the federal government. The 18 members of the committee represent the three national libraries (the Library of Congress, the National Agricultural Library, and the National Medical Library), the executive departments, and independent federal agencies. The committee will make recommendations for utilizing the resources of federal libraries to meet the expanding need for information. The Council on Library Resources granted the committee $10,000 to defray administration costs.

A center for the coordination of foreign manuscript copying was established in the Library of

AMERICAN LIBRARY ASSOCIATION



LIBRARY/U.S.A. exhibit at the United States Pavilion of the New York World's Fair included an information center where electronic computer techniques provided instant information on 75 subjects.

Congress with the aid of a $75,300 grant from the Council on Library Resources. The center will attempt to coordinate photocopying projects conducted in foreign libraries and archives by American institutions, thereby avoiding duplication of effort and expense.

A third building for the Library of Congress, to be named for President James Madison, was approved by Congress in 1965.

The University of Texas, Austin, announced that it will build, furnish, and equip a library to house President Johnson's papers after he leaves office. The Johnson library will be the sixth federally administered presidential library.

Library Education. In 1964 the number of graduates of accredited library schools reached a record of more than 2,500. However, as in preceding years, the number of vacancies available in libraries exceeded the number of library school graduates. Salaries ranged from $3,600 to $15,944, and the average salary reached a new high of $6,145—over $300 more than the 1963 average. (The average salary in 1964 exceeded the highest salary—$6,000—reported in 1951.)

Recruiting persons for the library profession continued to be a major program of library associations, library schools, and librarians. The University of Wisconsin launched a program to attract adults, such as housewives and early retirees, to librarianship.

U.S. Activities. Librarians recognize that professional growth is essential if they are to keep in touch with the rapid developments in librarianship and with major changes in technology. To meet this need, 258 conferences, workshops, and short courses for continuing education were held in 1965—almost twice as many as during 1964.

The Massachusetts Institute of Technology (MIT) sponsored a planning conference of librarians, engineers, and other experts at Woods Hole, Mass., to outline a four-year program of research in preparation for MIT's Project INTREX (Information Transfer Experiments). INTREX is an effort to develop ways for dealing with the flood of published knowledge by providing, by 1970, an on-line information transfer system for large university libraries. (See also AMERICAN LIBRARY ASSOCIATION.)

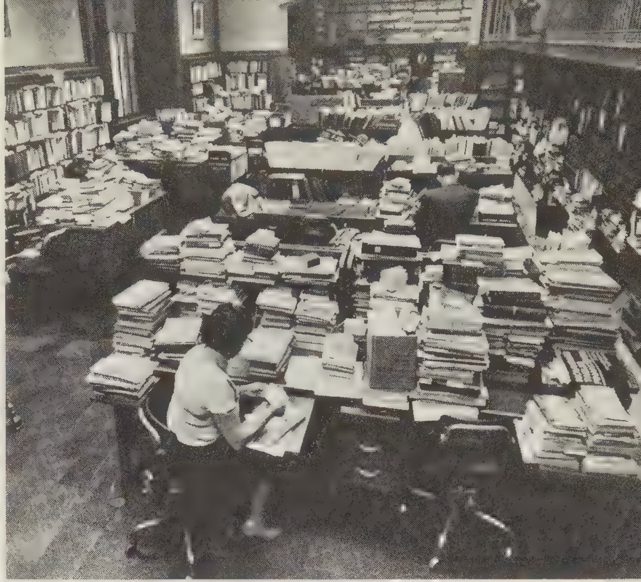
The Drexel Institute of Technology offered professional tours of selected American and European libraries.

IFLA Meeting. More than 200 delegates and observers met in Helsinki, Finland, Aug. 15–20, 1965, for the 31st Conference of the International Federation of Library Associations (IFLA). The conference discussed the international and interlingual aspects of library service, covering such subjects as bilingual catalogs; library activities of international organizations, such as the International Standards Organization and UNESCO; and developments in international cooperation in the library field.

At the meeting, the USSR reported on its extensive translation and book and periodical exchange programs. The United States reported on its technical assistance to the libraries of developing countries, and on arrangements for visits by foreign librarians to the United States.

It was announced that the IFLA will sponsor a seminar on library education in Paris, May 24–26, 1966. The IFLA had 78 members and 12 associate members in 1965.

FID Conference. The International Federation for Documentation (FID) held its 31st annual conference in Washington, D.C., Oct. 7–9, 1965. The conference was followed by a week-long congress (October 10–15) on meeting the demand for scientific information. More than 900 librarians and documentalists attended the congress.



THE NEW YORK TIMES

SPACE PROBLEMS and financial difficulties combined to cause a backlog of 70,000 uncatalogued volumes—representing a year's work—at the New York Public Library.

The 32nd FID conference will be at The Hague, Sept. 19–24, 1966. FID membership reached 40 in 1965 when four more national organizations joined.

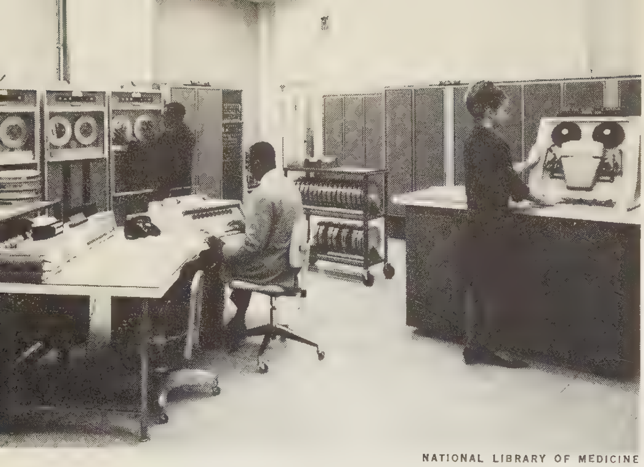
UNESCO. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) set up a new Department of Libraries, Documentation, and Archives to replace its Libraries Division. During 1965, UNESCO gave aid to 30 countries by sending experts, granting fellowships, or providing equipment for the development of libraries.

UNESCO contracted with IFLA to prepare bibliographies and publish an annotated edition of the findings of the International Conference on Cataloging Principles. UNESCO also arranged to cooperate with FID in preparing a directory of professional training schools and courses for archivists, research librarians, and documentalists. In addition, a manual for teaching librarianship is being prepared under UNESCO auspices.

UNESCO's most ambitious library project is in Ecuador, where experts have surveyed the library facilities and proposed a national plan for library services. The government of Ecuador, which has budgeted 20% of its federal resources to education—the highest percentage given to any government department—is firmly committed to support the program. UNESCO also assisted several countries in Africa in establishing model public libraries or school libraries that will become part of their national library systems.

West Germany. West Germany made plans in 1965 to bring groups of library leaders from the United States, Canada, Britain, and France to visit libraries in Germany as guests of the German government. Foreign delegates, likewise guests of the German government, attended library conferences in Germany. Short-term employment of foreign librarians in German libraries was also arranged.

Denmark. The Danish Public Libraries Act of 1964 went into effect in 1965. Under this law, all communities must have public library service with



NATIONAL LIBRARY OF MEDICINE

A COMPUTER-BASED SYSTEM of information storage and retrieval at the National Library of Medicine, Bethesda, Md., is the first of its kind in the United States.

a full-time, professional librarian available. Furthermore, library cards may be used in any public library in the country. Denmark's federal and local support for the library system was raised from 17 kroner per capita ($2.46) in 1963–64, to 26 kroner per capita ($3.76) in 1965–66. Cooperation between public and school libraries to provide library service for children is required by law in Denmark.

Canada. Public libraries in Canada do not meet Canadian Library Association standards in many areas, according to statistics released for 1963. Instead of the standards requirement of 1.5 volumes per capita, Canadian public libraries had an average of 0.88 volume per capita. Current operating expenses amounted to $1.28 per capita, rather than the recommended $2.00, and the ratio of professionally trained librarians was one to every 25,781 persons, as against one for every 7,500 persons, as recommended. The total payments for public libraries in 1963 were $24,187,650. University libraries spent an average of $69.83 per student, and school libraries spent an average of $2.45 per pupil on books and other library materials.

USIS Libraries. The United States Information Service closed its Benjamin Franklin Library in Paris and four branches in French university towns because of congressional budget cuts. After anti-American crowds attacked the USIS library in the United Arab Republic in November 1964, President Nasser offered rent-free quarters for the library and the use of some of his own books. The Panama library, burned in 1964, was reopened in 1965.

National Library Week. The 8th annual National Library Week (NLW) was observed from April 25 to May 1, 1965, with record-breaking participation. The 9th NLW will be observed from April 17 to 23, 1966. The sponsoring groups will re-evaluate the purposes and programs of National Library Week.

U.S. Office of Education Reorganization. On July 1, 1965, as part of the reorganization of the U.S. Office of Education, the Division of Library Services and Educational Facilities became a part of the Bureau of Adult and Vocational Education. The division's Library Services Branch will continue to administer the Library Services and Construction Act and grants for the educational television program. Several new consultant positions were created to fulfill the functions established under the act.

RUTH M. WHITE
Headquarters Librarian
American Library Association

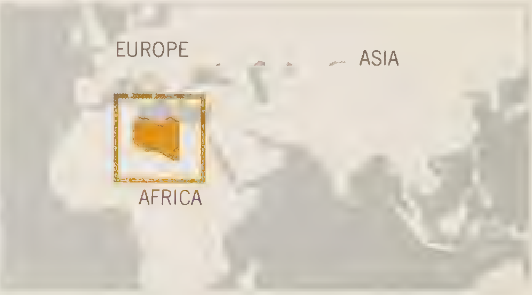
LIBYA

The new Libyan government of Premier Hussein Mazik showed its independence in foreign affairs during 1965 by refusing to follow the example of other Arab countries in cutting relations with West Germany. On the domestic scene, elections to the National Assembly were held in May.

New Government. Hussein Mazik, former foreign minister, became the new premier of Libya on March 20 when Mahmoud Muntasser resigned because of alleged ill health. King Idris I chose Dr. Wahbi al-Buri, Libya's former delegate to the United Nations, as the new foreign minister.

Premier Mazik immediately came under fire from the Cairo press for his government's decision not to follow the Arab foreign ministers' recommendation to sever relations with West Germany if that nation should recognize Israel. After diplomatic relations between West Germany and Israel were established on May 12, Libya maintained its ties with West Germany.

Oil Sabotage. Late in May, five oil wells in a British-American oil concession area in southeastern Libya were dynamited by saboteurs. There were reports that the dynamiting was the work of Egyptian saboteurs protesting the Libyan government's refusal to follow the United Arab Republic in severing relations with West Germany. In July, three oil tanks were blown up at Marsa Brega.



LIBYA · Information Highlights

Area: 679,358 square miles.
Population: 1,559,399 (July 31, 1964 census).
Chief Cities (1964 census): Tripoli, the capital, 212,577; Benghazi, 136,641.
Government: *King*—Idris I (acceded 1951); *Premier*—Hussein Mazik (took office March 21, 1965). *Parliament*—Senate, 24 members (all appointed by the king); Chamber of Deputies, 91 members (elected by universal suffrage).
Religious Faiths: Muslims, 95% (est.) of population; Roman Catholics,. 2.5%; others, 2.5%.
Education: *Literacy rate*—40% of population. *Total school enrollment* (1963–64)—186,530 (primary, 158,961; preparatory, 18,550; secondary, 3,279; teacher-training, 2,407; technical, 2,094; university, 1,239).
Finance (fiscal 1965): *Revenues,* $204,244,000; *expenditures,* $240,244,000; *monetary unit,* Libyan pound (0.3571 pound equals U.S.$1).
Gross Domestic Product (1964): $330,400,000.
Manufacturing (metric tons): Olive oil (1964–65), 18,000; wine (1962–63), 3,000.
Crops (metric tons, 1962–63 crop year): Olives (1963–64), 101,000; tomatoes (1963–64), 102,000; dates, 10,000; grapes, 6,000; figs, 3,400.
Minerals (metric tons, 1964): Crude petroleum, 315,642,000 barrels (ranks 8th among world producers); lime (1962), 17,000; salt, 12,700.
Foreign Trade (1964): *Exports,* $620,000,000 (chief export: crude petroleum, $606,000,000); *imports,* $292,000,000 (chief imports, 1963: iron and steel pipes, tubes, and fittings, $22,000,000; trucks, $11,000,000; wheat meal and flour, $7,000,000). *Chief trading partners* (1963): Britain (took 28% of exports, supplied 18% of imports); West Germany (took 25% of exports, supplied 13% of imports); Italy (took 15% of exports, supplied 21% of imports).
Transportation: *Roads* (1964), 11,577 miles (6,824 paved); *motor vehicles* (1964), 44,209 (automobiles, 28,708); *railways* (1963), 220 miles; *civil airline,* Libiavia; *principal airports,* Benghazi, Tripoli.
Communications: *Telephones* (1964): 12,128; *radios* (1962), 86,000; *newspapers* (1961), 2 (daily circulation, 8,500).

UPI PHOTOS

LIBYAN ARCHAEOLOGICAL EXPEDITION discovered a clay vessel (*l.*) in the desert and a cave drawing (*above*) in the Aka Kouss Mountains near the ancient city of Germa, Libya. The cave drawing is said to date back to 5000 B.C.

Elections. King Idris, responding to complaints of irregularities in the October 1964 elections, dissolved the Libyan House of Representatives on February 13 and set May 8 as the date for new elections. In March he decreed that the number of seats in the new House would be cut from 103 to 91. The elections on May 8 were followed by antigovernment demonstrations in Tripoli. The demonstrators charged that candidates who were considered too progressive by the government had illegally been declared defeated. King Idris, nevertheless,opened the new parliamentary session on May 22.

Troop Removals. Libya negotiated during 1965 with Britain for the latter's removal of its troops from Libyan soil. The Libyan government also pressed the United States about a decision as to when U.S. troops stationed at Wheelus Air Force Base, on the outskirts of Tripoli, would be removed. In 1964 both Britain and the United States had agreed in principle to remove their troops.

Budget. The Libyan Parliament approved a budget in June for the 1966 fiscal year which totaled $464,428,000, more than double the budget for the previous fiscal year.

LIFE INSURANCE. See INSURANCE.

LIQUOR INDUSTRY. See DISTILLING INDUSTRY.

LITERATURE. See AMERICAN LITERATURE; CANADIAN LITERATURE; ENGLISH LITERATURE; FRENCH LITERATURE; GERMAN LITERATURE; ITALIAN LITERATURE; LATIN AMERICAN LITERATURE; SOVIET LITERATURE; SPANISH LITERATURE.

LITERATURE FOR CHILDREN. See CHILDREN'S LITERATURE.

LITHUANIA. See UNION OF SOVIET SOCIALIST REPUBLICS.

LIVESTOCK

After increasing every year from 1957 to 1964, the number of cattle and calves in the United States declined slightly in 1965. The inventory on Jan. 1, 1966, was more than one million head below the 107,152,000 head a year earlier.

Slaughter, the chief cause of the 1965 decline in inventory, increased to over 40,500,000 head, about 4% above 1964, and 15% over 1963. Live cattle imports, primarily from Canada and Mexico, exceeded 700,000, or some 150,000 over 1964. The 1965 calf crop rose by less than 1% to 43,119,000 head.

Total hog slaughter in the United States in 1965 fell an estimated 10% below the 86,419,500 killed in 1964. The spring and fall pig crops both ran smaller than a year earlier, and their total of about 80,727,000 head represented a 9% decrease.

Sheep and lamb numbers remained nearly stationary in 1965 after declining for six straight years. The inventory of about 26,500,000 head on Jan. 1, 1966, was only one fifth as large as the peak of 33,170,000 reached in 1960.

Slaughter of about 13,400,000 head of sheep and lambs in 1965 was 10% smaller than in 1964. The 1965 lamb crop of 17,606,000 declined 2%.

U.S. Poultry. Egg production in 1965 totaled slightly under 179,000,000 cases, or 1% less than in 1964. The decrease resulted from a slight reduction in the number of hens, since the average rate of egg output per hen continued to increase.

Broiler production increased for the 19th consecutive year. Production totaling 8,050,000,000 pounds of liveweight broilers was 7% larger than that produced in 1964. The 1965 turkey crop of 103,700,000 was 4% larger than a year earlier. Because of heavier slaughter weights, liveweight turkey production climbed even faster, and output was up 6% over 1964.

U.S. exports of poultry declined in 1965. From January through September, turkey exports totaled 34,447,000 pounds, up 34% from the total in the comparable period of 1964. However, broiler shipments for the first eight months totaled 54,085,000 pounds, down 34%.

World Livestock Population. The world population of cattle and buffalo in 1965 increased about 2% over 1964, from 1,067,100,000 to 1,084,200,000. The 1965 gain over the 1956–60 average was 11%.

Hog numbers in the world in early 1965 reversed the decline of a year earlier. The 1965 figure of 459,460,000 head was 6% above the early 1964 total and 7% above the 1956–60 average. This increase was a continuation of a substantial upward trend from the 1956–60 level in all areas of the world, except in Asia and North America. The marked decrease in hog numbers registered in the United States in 1964 continued in 1965.

World sheep numbers in early 1965 were estimated at 986,300,000, down slightly from each of the two previous years, but 5% above the average of 1956–60.

RAY REIMAN
President, Farm Business, Inc., Washington, D.C.

LOS ANGELES riot scene, guarded by California National Guardsmen, is deserted after three days of racial violence, arson, and looting in April. The riots took place in Watts, a predominantly Negro section of southwestern Los Angeles.

WIDE WORLD

LOS ANGELES

The worst racial violence in the city's history raged for five days in August in the Watts section, a predominantly Negro neighborhood in southwestern Los Angeles. In other developments, Mayor Samuel W. Yorty won a second term in the municipal elections in April, and the City Council approved a record budget for the fiscal year 1966.

Watts Riots. Racial violence was triggered on August 11 when a white highway patrolman stopped a Negro driver in Watts on suspicion of drunken driving. After an angry crowd gathered and police reinforcements arrived, mob rioting, looting, and burning began. Hundreds of law-enforcement officials, reenforced by over 12,000 National Guardsmen, were required to quell the disturbance, which spread through a 20-block area until it ended on August 15. Thirty-four people were killed, another 1,032 were injured, and property damage, which included the total destruction of 200 buildings, was estimated at $40 million. Over 3,952 rioters were arrested.

On August 24, Gov. Edmund G. Brown appointed an eight-man commission, headed by John A. McCone, former director of the Central Intelligence Agency, to study the causes of the riot. The report of the commission, issued in December, called for "costly and extreme" action to improve the situation that led to the riots. The commission recommended a massive reading program for schools in disadvantaged areas, a large-scale job training and placement center in the Watts area, a new mechanism for processing complaints of alleged police brutality, and greatly increased mass transit facilities to enable Negroes to commute to jobs in other parts of the city.

RUBBLE-STREWN STREET in Watts shows the charred debris of one of the many buildings burned during the riots.

PIX

Municipal Elections. In the municipal elections on April 7, Mayor Samuel W. Yorty, a Democrat, handily won a second four-year term in the nonpartisan, seven-candidate mayoralty race. James Roosevelt, a Democratic congressional representative, was runner-up.

Two of the mayor's opponents among members of the City Council—Mrs. Rosalind Wyman and Karl L. Rundberg—were not reelected. Their defeat aroused speculation that the long-standing feud between the mayor and the council might be at an end. Within a month after the election, however, the council defeated two of the mayor's proposals. One called for a $50,000 study on the need for revising the city charter. The other would have placed the city's representative in the state legislature under joint control of the mayor and council, rather than under the council only, as at present.

Rapid Transit. The Southern California Rapid Transit District, which replaced the Metropolitan Transit Authority in November 1964, ran into trouble with its efforts to finance the first stages of a comprehensive public transportation system for the Los Angeles area. It failed to get legislative authorization to levy new property taxes and an in-lieu tax on autos and trucks.

Public Finance and Economy. The budget for the 1966 fiscal year called for record expenditures of $318,623,360, up more than $17 million from the previous fiscal year. The Los Angeles property tax rate was increased about 2 cents, from $2.0871 to $2.1087 per $100 assessed valuation. The city's net funded debt on July 1 stood at $244.5 million.

Retail sales in Los Angeles County in 1964 totaled $11,460,450,000. In July 1965, average industrial employment in the county was 782,900, and unemployment totaled 180,200. The average gross weekly earnings in manufacturing in 1964 were $122.29. In October 1965 the consumer price index was 112.8 (1957–59 = 100)—a rise of 2.8 since the previous October.

Other Developments. The Los Angeles County Art Museum was opened in April. It is the largest art museum built in the United States since the National Gallery was opened in Washington, D.C., in 1941, and the largest art museum west of the Mississippi River.

Between November 13 and November 24, the Los Angeles area was inundated by 10 to 20 inches of rain. Flash floods and mud slides caused several deaths and extensive property damage. The storms touched off a tornado that cut through the Los Angeles County Fairgrounds on November 25.

The Los Angeles Dodgers defeated the Minnesota Twins to win baseball's 1965 World Series.

Population. By mid-1965 the city's population had reached an estimated 2,738,000, with 6,880,000 in the metropolitan area. Many of the city's problems are the outgrowth of its steady rise in population.

Dr. Gerald Rigby
Assistant Professor of Political Science
University of Southern California

LOUISIANA

With winds clocked at between 170 and 180 miles per hour, hurricane Betsy struck southeastern Louisiana on Sept. 9, 1965, causing widespread devastation. Eighty-one persons in the state died as the result of the storm, and property damage was estimated at nearly $400 million.

A vast wall of water, pushed by the force of the winds, inundated wide areas of southeastern Louisiana, including a large segment of New Orleans. Oceangoing vessels, pulled from their moorings, were pushed, stern-first, upstream against the current of the Mississippi River at speeds of 25 miles an hour, and thrust on the river levees.

LOUISIANA · Information Highlights

Area: 48,523 square miles.
Population: 3,480,000 (1965 est.).
Chief Cities (1965 est.): Baton Rouge, the capital (166,000); New Orleans (655,000); Shreveport (171,000); Metairie (95,000); Lake Charles (65,000); Monroe (57,500).
Government: *Chief Officers*—governor, John J. McKeithen (Democrat); lt. gov., C.C. Aycock (D); secy. of state, Wade O. Martin, Jr. (D); atty. gen., Jack P.F. Gremillion (D); treas., A.P. Tugwell; supt. of education, William J. Dodd; chief justice, John B. Fournet. *Legislature*—Louisiana State Legislature (convened May 10, 1965); Senate, 39 members (all Democrats); House of Representatives, 105 members (103 D, 2 R).
Education: *School enrollment* (1964–65)—public elementary, 600,000 pupils (18,100 teachers); public secondary, 210,000 pupils (13,100 teachers); nonpublic schools, 161,800 pupils (5,080 teachers); college and university (fall 1964), 83,027 students. *Public school expenditures* (1964–65)—$304,000,000 ($418 per pupil); average teacher's salary, $5,175.
Public Finance: (fiscal year 1964): *Revenues,* $963,278,650 (2% sales tax, $104,747,824; motor fuel tax, $69,008,171; federal funds, $292,488,528). *Expenditures,* $968,856,039 (education, $314,241,282; health, welfare, and safety, $264,223,538; highways, $208,331,989). *State debt,* $407,164,500 (June 30, 1964).
Personal Income (1964): $6,510,000,000; average annual income per person, $1,877.
Public Assistance (fiscal year 1965): $154,209,452 to 183,503 recipients (aged, $105,905,193; dependent children, $28,220,219).
Labor Force (employed persons, July 1965): *Agricultural,* 99,100; *nonagricultural* (wage and salary earners), 907,100 (18% manufacturing, 22% trade, 18% government). *Unemployed persons* (July 1965)—54,600.
Manufacturing (1963): Value added by manufacture, $1,917,824,000 (transportation equipment, $114,072,000; primary metals, $85,966,000; nonelectrical machinery, $37,621,000; electrical machinery, $2,443,000; fabricated metals, $77,674,000; food and products, $374,536,000).
Agriculture (1964): *Cash farm income,* $490,757,000 (livestock, $160,433,000; crops, $308,229,000; govt. payments, $22,095,000). *Chief crops* (tons)—sugarcane, 7,590,000 (ranks 2nd among the states); rice, 846,000 (rank, 3rd); cotton lint, 142,800 (rank, 9th); cottonseed, 247,000 (rank, 9th); sweet potatoes, 178,500 (rank, 1st); citrus fruits, 450 (rank, 5th); hay, 626,000; corn for grain, 186,000.
Mining (1964): *Production value,* $2,785,007,000 (ranks 2nd among the states). *Chief minerals* (tons)—salt, 6,401,000 (rank, 2nd); lime, 725,000 (rank, 7th); sulfur (Frasch process), 3,061,000 (rank, 2nd); crude petroleum, 549,698,000 barrels (rank, 2nd); natural gas, 4,175,412,000,000 cubic feet (rank, 2nd); clays, 780,000.
Fisheries (1964): *Commercial catch,* 703,584,700 pounds ($34,684,154). *Leading species*—menhaden, 599,537,500 pounds ($9,045,557); saltwater shrimp, 59,365,000 pounds ($18,789,964); oysters, 11,401,100 pounds ($2,976,152); catfish and bullheads, 7,807,800 pounds ($1,802,275).
Transportation: *Roads* (1965), 49,831 miles (43,898 paved); *motor vehicles* (1964), 1,473,623; *railroads* (1963), 3,904 miles; *airports,* 164.
Communications: *Telephones* (1965), 1,274,700; *television stations* (1964), 12; *radio stations* (1964), 95; *newspapers* (1965), 21 (daily circulation in 1964, 771,277).

The storm displaced thousands of persons from their homes in wide areas of southeastern Louisiana. More than 4,948,000 pounds of food was provided for emergency feeding by the U.S. Department of Agriculture. In terms of property losses, the storm was the most destructive natural disaster that took place in the United States in 1965.

Civil Rights. Louisiana's civil rights problems again attracted attention during the year. The Ku Klux Klan was active in the rural areas of the state, and Negro civil rights groups were operating in some of the cities. National interest was centered on Bogalusa, a purported stronghold of the Klan. Negro civil rights groups moved into the town at the beginning of the year to demand equal employment opportunities for Negroes and the desegregation of schools and public facilities. During the demonstrations that followed, state and local leadership was largely successful in preventing violence in the Bogalusa area.

On August 26, to maintain communication between white and Negro factions in the state, Gov. John J. McKeithen established the Louisiana Commission on Race Relations. Gen. Troy H. Middleton, president emeritus of Louisiana State University, was named chairman of the committee, and Dr. Albert W. Dent, president of Dillard University, in New Orleans, was chosen vice chairman. The 42-member committee, equally divided between white and Negro members, will act as an advisory group in areas of the state that require advice on handling racial problems.

Legislation. A total of 366 bills were introduced during the 1965 regular session of the Louisiana State Legislature. Of these bills, 166 became statutory law, and 9 were approved as proposed amendments to the state constitution. The proposed amendments will go to the voters in the state elections of November 1966. The most significant proposed amendment provides that a governor may serve two successive four-year terms, rather than only one term, as at present.

The legislature greatly broadened the authority to invest idle state funds. Also, a capital budget

LOUISIANA Gov. John J. McKeithen (center) meets with Jonesboro Negroes demanding better educational facilities.

UPI

program was initiated along with the tightening of administrative processes through a Division of Administration directly under the governor.

Economy. A tremendous building boom took place in Louisiana during the year. More than $1 billion worth of new chemical plants, petroleum refineries, power-generating stations, and other projects were under construction. Boom areas were situated on the Mississippi River between New Orleans and Baton Rouge, and around the port city of Lake Charles.

A shortage of labor existed, particularly in the manual skills. As of September, 97% of the labor force in the state was gainfully employed—the largest proportion at any time in the past 10 years. To meet the threat of inflation and the problems caused by the scarcity of labor, high-level conferences were held among government, industry, and labor leaders.

William W. Shaw
Professor of Political Science
Tulane University

LUMBER. See Forestry.

LUTHERAN CHURCHES

The creation of a Lutheran Council in the United States of America (LCUSA) as a cooperative agency among the four major Lutheran groups was assured in 1965. Following approval of membership in the council by the American Lutheran Church in 1964, the Lutheran Church-Missouri Synod and the Synod of Evangelical Lutheran Churches voted to participate in 1965. The fourth body, the Lutheran Church in America, is expected to join in 1966.

The LCUSA, scheduled to succeed the present National Lutheran Council in 1967, is intended to promote theological study and Christian service. The four bodies under the LCUSA banner represent more than 96% of the 8,707,273 Lutherans in the United States. Affiliated groups in Canada, with 295,696 members, have begun to form a similar agency.

In a highly significant action, the Missouri Synod authorized cooperation with other Lutheran bodies in the preparation of a joint hymnal and liturgy. It is believed that a common service book will be an effective means for promoting Lutheran unity. The Synod also approved studies looking toward changing its name and relocating its headquarters, presently in St. Louis. The Synod reelected Dr. Oliver R. Harms as president and, in line with a change from triennial to biennial conventions, voted a four-year term for this office.

The first official theological consultations ever held between Lutheran and Roman Catholic churchmen took place in July 1965. Seventeen scholars and officials of the two communions examined Lutheran and Catholic interpretations of the topic "Status of the Nicene Creed as Dogma of the Church." The consultations were the first of a series of discussions on a wide range of theological questions.

For the third successive year, Lutheran and Reformed churchmen held conversations related to the traditions of the two communions. They planned a final evaluation session in 1966. Preliminary steps were taken also for Lutheran-Orthodox talks.

On Reformation Day, observed on October 31, a three-volume *Encyclopedia of the Lutheran Church* (1965) was published. This is the most complete reference work on Lutheranism available in English. The encyclopedia includes articles on doctrine, church history, church government, Christian Education, liturgy, religious art, missions, and welfare activities. It also contains about a thousand biographies of great Lutheran leaders of the past.

Erik W. Modean
Secretary, News Bureau
National Lutheran Council

LUXEMBOURG

EUROPE
ASIA
AFRICA

Luxembourg City was the site for meetings of the European Economic Community (EEC or Common Market) from January 17 to 18 and January 28 to 30, 1966, at which France and the other five EEC members (West Germany, Italy, Belgium, the Netherlands, and Luxembourg) reached a compromise agreement on questions of political integration within the economic union (see Europe). France, which had boycotted all EEC sessions from July through December 1965, agreed to attend the January meetings only after the site was changed from EEC headquarters in Geneva to Luxembourg. Premier Pierre Werner of Luxembourg presided over the EEC Ministerial council during these negotiations.

Luxembourg was not exempt from the inflationary pressures prevalent in western Europe in 1965. The gross national product climbed only 2%, while the retail price index rose at least 3%. However, few people were concerned as wages were among the highest in Europe and the number of unemployed workers was only 10. Despite diversification attempts, steel accounted for over half of business activity.

LUXEMBOURG · Information Highlights

Area: 998 square miles.
Population: 330,000 (Dec. 31, 1964 est.).
Chief City (1963 est.): Luxembourg, the capital, 75,166.
Government: *Head of State*—Grand Duke Jean (acceded Nov. 12, 1964); *Premier*—Pierre Werner (took office Feb. 26, 1959). *Parliament*—Chamber of Deputies, 56 members; party seating (1965): Christian Social, 22; Socialist, 21; Democratic, 6; Communist, 5; Independent Popular Movement, 2.
Religious Faiths: Roman Catholics, 92% of population; others, 8%.
Education: *Literacy rate*—99% of population. *Total school enrollment* (1962–63)—40,115 (primary, 31,828; secondary, 4,561; teacher-training, 105; technical, 3,621).
Finance (1965 est.): *Revenues,* $156,412,000; *expenditures,* $158,236,000; *monetary unit,* franc (50 francs equal U.S.$1).
Gross National Product (1963): $550,000,000.
National Income (1964): $480,000,000; average annual income per person, $1,463.
Economic Indexes (1964): *Industrial production* (1958=100), 124; *cost of living* (1958=100), 108.
Manufacturing (metric tons, 1963): Crude steel (1964), 4,559,000; cement, 203,000; beer, 47,100; meat, 24,000; wine, 15,000; butter, 5,000; lumber, 58,000 cubic meters.
Crops (metric tons): Oats (1964), 43,000; grapes (1963), 21,000; rye (1964), 7,000; cabbages (1962), 1,000.
Chief Mineral (metric tons, 1964): Iron ore, 6,680,000 (ranks 14th among world producers).
Transportation: *Roads* (1964), 2,759 miles; *motor vehicles* (1964), 64,200 (automobiles, 52,500); *railways* (1963), 230 miles; civil airline, Luxair; *principal airport,* Luxembourg.
Communications: *Telephones* (1964), 67,899; *television stations* (1964), 1; *television sets* (1964), 21,000; *radios* (1963), 107,000; *newspapers* (1960), 5 (daily circulation, 140,000).

McNAMARA, Robert Strange

U.S. secretary of defense: b. San Francisco, Calif., June 9, 1916.

In view of the confrontation between the United States and world communism, and considering that the Department of Defense spends about half of the federal budget, one would expect that in 1965 the secretary of defense would exert considerable influence in national affairs. But Robert McNamara, more than merely influential, was widely regarded as the most powerful person in Washington next to the president. McNamara, pledged to preserve American military power, imposed at the same time the most rigid economies in his department. In his vigorous efforts to execute these almost contrary objectives, he was the subject of both admiration and criticism.

Vietnam. In 1963, McNamara had predicted that most U.S. military personnel would be out of Vietnam by the end of 1965. But as Communist insurrectionists increased their pressure on South Vietnam, the United States stepped up its military aid to the latter. On Feb. 18, 1965, the secretary told a House committee that the loss of South Vietnam would "greatly increase the prestige of Communist China among the nonaligned nations and strengthen the position of their following everywhere."

During a trip to Vietnam (July 16–20, 1965), McNamara heard American and Vietnamese military leaders recommend that the United States increase its aid. Before leaving Vietnam, the secretary said that the situation had deteriorated, and that the Communists had increased their forces and the number of their attacks. McNamara then conferred with President Johnson for several days, after which the president announced, on July 28, that the U.S. military forces in Vietnam would be increased sharply.

In November, McNamara went to Vietnam for the seventh time in five years. He concluded that the Communists had chosen to "raise the level of conflict" and that "it will be a long war."

The Defense Establishment. In 1965, Secretary McNamara often cited the growth of U.S. strength during his administration. Nuclear weapons had tripled, the number of combat-ready Army divisions had risen from 11 to 16, the number of tactical fighter aircraft had climbed from 1,200 to 1,600, and counterinsurgency forces had increased tenfold.

But critics complained that McNamara downgraded or ignored advice from military men. Senator J. William Fulbright said that he exerted too much influence on foreign affairs. L. Mendel Rivers, chairman of the House Armed Services Committee, favored a congressional veto over the closing of military bases, but the economy-minded McNamara shut down some more bases in 1965. Congress blocked McNamara's effort to merge the Army Reserve and the National Guard, and doubled the military pay increases which McNamara had requested. Despite congressional pleas that he defer action, McNamara announced on December 13 that he would disband 751 Army Reserve units. In 1965, missiles continued to play the major role in McNamara's defense plans, to the dismay of the proponents of manned bombers.

Background. McNamara graduated from the University of California in 1937 and from the Harvard University Graduate School of Business Administration in 1939. He taught at Harvard from 1940 to 1943, and then served with the Army Air Forces. In 1946, he joined the Ford Motor Company as a financial analyst, became general manager of the Ford Division in 1955, and company president on Nov. 9, 1960. A month later, he accepted President-elect Kennedy's invitation to become secretary of defense.

DEFENSE SECRETARY McNAMARA, at a news conference on February 7, discusses first U.S. bombing of North Vietnam after raids on American bases.

PICTORIAL PARADE

MAGAZINES

With advertising revenues at an all-time high of $746,784,678 for the first 9 months of 1965, general and farm magazines in the United States expected a record total advertising income of over $1 billion for the entire year. A similar total had been anticipated for 1964, but the final figure was $996,821,818. The Publishers Information Bureau, Inc., estimated circulation in the first half of 1965 at 210,815,000, a gain of 2.6%. Advertising pages for 1965 were expected to exceed 81,000, compared with 78,300 in 1964.

Despite rising costs, net profits for the U.S. magazine business were expected to run about 4% of sales, holding closely to the higher-than-anticipated 4.3% earned in 1964.

New Ownership. Important changes in ownership and management were made in 1965. A newspaper, the Minneapolis *Star and Tribune*, bought a half-interest in *Harper's Magazine*. Dell Publishing Co. purchased 75-year old Noble & Noble, publisher of elementary and secondary school textbooks. Metromedia, Inc. (TV, radio, billboards, etc.) acquired *Diplomat*. The 75-year-old *Printers' Ink* was purchased by an employee group. *Show* was sold to *Playbill* (theater programs) and ceased publication with the May issue.

New Policies. Among major policy changes, Curtis Publishing Co., in an attempt to break even financially in 1965, instituted drastic cutbacks, including the reduction of the *Saturday Evening Post* from 45 to 26 issues per year, and made major personnel changes. The company lost about $13.9 million in 1964. In other changes, the *New Yorker* joined the *Reader's Digest* and the *Saturday Review* in refusing to accept cigarette advertising; and a pharmaceutical manufacturer, whose products include a contraceptive, began an advertising campaign in support of planned parenthood in news and business magazines and in daily newspapers.

Business Publications. American Business Press, Inc., estimated that 1965 advertising revenue for business publications, exclusive of production costs, would exceed $672 million. There were some 2,600 business publications in the United States in 1965 (a gain of about 30 over the previous year), with a combined circulation of about 57 million. Advertising and editorial pages were estimated at 1,200,000 and 800,000, respectively.

Canadian Developments. After five years of discussion, Canada's Parliament enacted legislation to restrict the importation of some U.S. publications, and to disallow tax deductions to Canadian advertisers in non-Canadian periodicals aimed primarily at the Canadian market. Customs tariff amendments were instituted (effective 4 issues before Jan. 1, 1966) which prohibit foreign publishers from issuing special editions, split run or regional, that have advertisements primarily directed at the Canadian market if these advertisements do not appear in identical form in all editions of the issue distributed in the country of origin. The amendments also ban any issue of a foreign publication in which more than 5% of the advertising space indicates "specific sources of availability in Canada, or specific terms or conditions relating to the sale" of a product. *Time* and *Reader's Digest* were exempt from the amendments because they publish in Canada. However, the government was considering imposing special higher postal rates for them as part of a general postal increase for second- and third-class matter.

New Publications. Nearly 60 new general and specialized magazines were scheduled for publication in 1965 or early 1966, compared with some 40 a year earlier. Among the new consumer publications were: *Accent On Leisure; Aspen; Better Living Magazine; Colorado; Contemporary; Dare; Early Years; Expanse; In—For the Girl of Today; One Alone; Photo Screen; Rights Reviews; Sportfishing; Status; The Public Interest* (sponsored by Freedom House); *Vietnam Perspectives;* and *Weekend.*

Business and other specialized ventures included: *Air Force/Space Digest International; American Education* (which replaced *School Life*); *American Hospital Products; Business Economics; Catering Management; Chemicals 26; Chemical Purchasing; Closed Circuit Television; Coiffure Professionnelle; Columbia Journal of World Business; Cotton; Electronic Communicator; Electronics Week; Hospital Physician; Hospital Product News; Hunting, Fishing & Camping; Industrial Electronics Digest; Institutional Distribution; Journal of Purchasing; Marketing Forum; MD's Wife; Medical Horizons; Medical Opinion & Review; Paper Age; Plastic Laminating; Professional Barber; Purchasing International; Salon Owner; Sight & Sound Retailing; Specialty Foods; Surgery Digest; Timebuyer; Training in Business & Industry;* and *Your Vacation.*

JOHN FOSTER, JR.
Professor, Graduate School of Journalism
Columbia University

MAIL SERVICE. See POST OFFICE DEPARTMENT.

MAINE

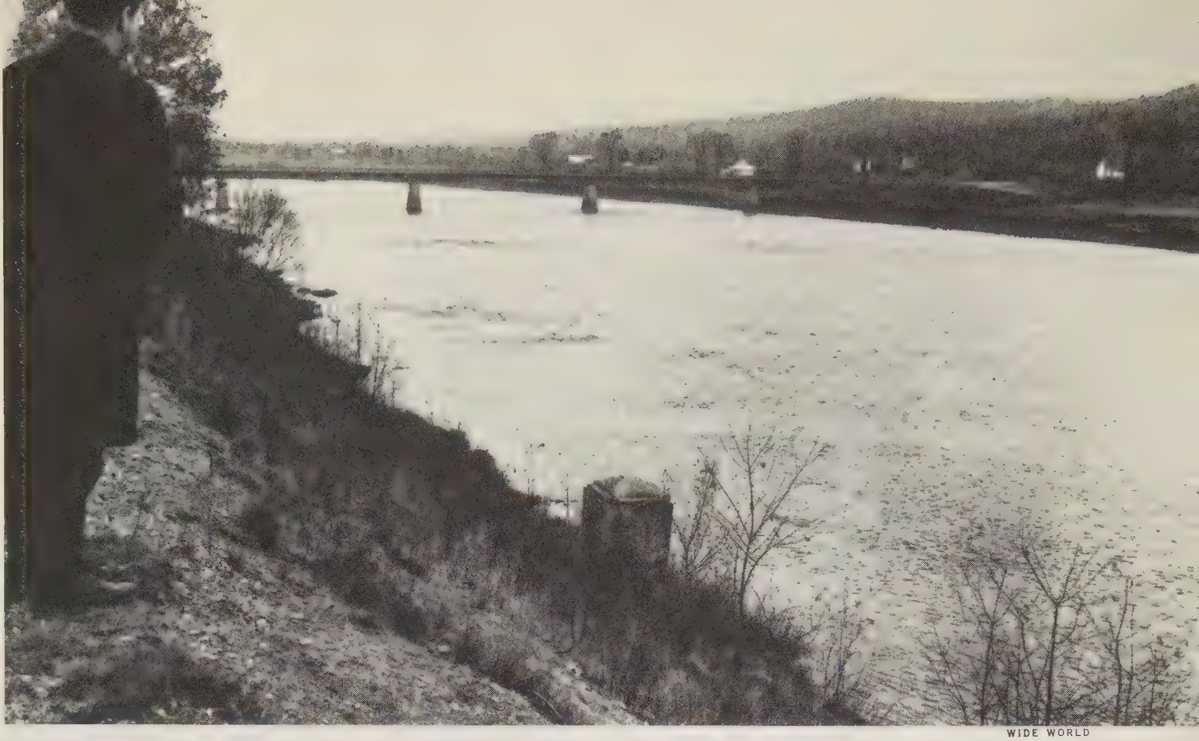
Congressional authorization of a hydroelectric dam on the St. John River and construction of a sugar beet refinery in Aroostook County were important events in Maine in 1965.

The Dickey Project. Originally conceived as a means of stabilizing the output of power from the long-studied Passamaquoddy Bay tidal power project, the Dickey Dam on the St. John River was the only portion of the project to be approved in 1965. The dam was authorized by Congress after President Johnson rescued the project from what appeared to be certain defeat in the House. The estimated cost of the dam is $227 million, as compared with $896 million for the combined Passamaquoddy Bay-St. John River power project.

Sugar Beet Refinery. A sugar beet refinery at Easton was under construction in 1965 and was scheduled to become operative in the fall of 1966. The $14.7 million plant, being built in part with federal funds, will make Maine the first New England state to grow and refine sugar in modern times. The refinery is expected to produce 37,000 tons of sugar in 1966, as well as molasses and dairy feed byproducts. Most of the beets will be grown in Aroostook County, thus broadening the base of the potato-oriented agriculture of the area.

Politics and Legislation. Faced by a Democratic Legislature, Republican Gov. John H. Reed presented a liberal legislative program which won considerable support from the Democrats. Legislation enacted included increased aid to education and a program that will force eventual consolidation of small school districts. Workmen's compensation payments were increased; the state minimum wage was raised from $1.00 to $1.25 an hour; and fair-employment and nondiscriminatory rental laws were passed.

To finance increased state spending, the Legisla-


WIDE WORLD

MAINE will derive hydroelectric power from the Dickey Dam to be built on the St. John River as part of a $227 million Passamaquoddy power project.

ture enacted miscellaneous tax increases. (However, it was assumed that existing levies would produce additional revenue.) By late 1965 it appeared that Maine would continue to operate on a sound fiscal basis in spite of record-breaking expenditures.

Six bond issues for highways and education were approved by the voters on November 2. Three constitutional amendments also were approved.

Economic Conditions. Maine experienced its best tourist season in 1965. Employment was high in most of the state during the year, but agricultural production was hurt somewhat by the fourth consecutive year of drought.

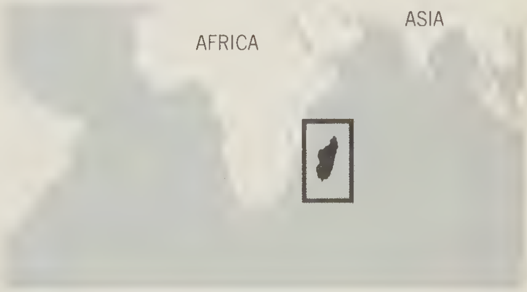
Education. The University of Maine celebrated its 100th anniversary and selected Dr. Edwin H. Young to succeed Lloyd H. Elliott as president.

EDWARD F. DOW
Head, Department of History and Government
University of Maine

MAINE · Information Highlights

Area: 33,215 square miles.
Population: 989,000 (1965 est.).
Chief Cities (1965 est.): Augusta, the capital (21,800); Portland (72,000); Lewiston (42,500); Bangor (39,000); Auburn (24,200); South Portland (23,200); Biddeford (18,800); Waterville (18,500).
Government: *Chief Officers*—governor, John H. Reed (Republican); secy. of state, Kenneth M. Curtis (Democrat); atty. gen., Richard J. Dubord (D); treas., Eben L. Elwell; comm. of educ., William T. Logan, Jr.; chief justice, Robert B. Williamson. *Legislature* (convened Jan. 6, 1965)—Senate, 34 members (29 Democrats, 5 Republicans); House of Representatives, 151 members (81 D, 70 R).
Education: *School enrollment* (1964–65)—public elementary, 162,000 pupils (6,330 teachers); public secondary, 57,500 pupils (2,860 teachers); nonpublic schools, 41,100 pupils (1,610 teachers); college and university (fall 1964), 18,445 students. *Public school expenditures* (1964–65)—$77,100,000 ($371 per pupil); average teacher's salary, $5,200.
Public Finance (fiscal year 1964): *Revenues*, $235,059,000 (4% sales tax, $40,780,000; motor fuel tax, $25,515,000; federal funds, $48,155,000). *Expenditures*, $223,596,000 (education, $48,662,000; health, welfare, and safety, $32,462,000; highways, $60,587,000). *State debt*, $73,521,000 (fiscal 1964).
Personal Income (1964): $2,108,000,000; average annual income per person, $2,132.
Public Assistance (fiscal year 1965): $17,074,019 to 42,275 recipients (aged, $7,004,917; dependent children, $6,303,137).
Labor Force (employed persons, Aug. 15, 1965): *Agricultural*, 23,000; *nonagricultural* (wage and salary earners), 341,100 (37% manufacturing, 19% trade, 17% government). *Unemployed persons* (Aug. 15, 1965)—13,700.
Manufacturing (1963): Value added by manufacture, $779,260,000 (transportation equipment, $40,212,000; paper and allied products, $229,754,000; food and products, $109,333,000); nonelectrical machinery, $13,320,000; electrical machinery, $9,807,000; fabricated metals, $15,259,000; leather and leather products, $136,612,000; textile products, $79,632,000; lumber and wood products, $60,951,000).
Agriculture (1964): *Cash farm income*, $232,468,000 (livestock, $129,085,000; crops, $100,671,000; govt. payments, $2,712,000). *Chief crops* (tons)—potatoes, 1,994,000 (ranks 2nd among the states); apples, 46,800 (rank, 14th); hay, 476,000; oats, 34,000; maple syrup, 10,000 gallons.
Mining (1964): *Production value*, $17,574,000 (ranks 47th among the states). *Chief minerals* (tons)—sand and gravel, 13,552,000; stone, 1,414,000; clays, 45,000.
Fisheries (1964): *Commercial catch*, 192,575,000 pounds ($21,958,000). *Leading species*—ocean perch, 58,936,000 pounds ($2,500,000); northern lobster, 21,413,000 pounds ($14,182,000).
Transportation: *Roads* (1965), 21,005 miles (18,735 surfaced); *motor vehicles* (1964), 408,894; *railroads* (1965), 2,521 miles; *airlines* (1965), 1 (103 airports).
Communications (1965): *Telephones*, 371,800; *television stations*, 9; *radio stations*, 31; *newspapers*, 9 (daily circulation, 253,925).

MALAGASY REPUBLIC



President Philibert Tsiranana received 95% of the votes in the Malagasy Republic's first popular presidential election, on March 30, 1965, and was reelected for another seven-year term. Earlier, the president's dominant Social Democratic party had won heavily in local elections, in which the only major upset for the Social Democrats was the election of Richard Andriamanjato, leader of the opposition Congress party, as mayor of the capital city of Tananarive. Following his victory, Tsiranana urged opposition parties to unite in order to form a strong opposition which could help to prevent a one-party state.

Trade Negotiations. In late 1964 the Malagasy Republic signed a three-year trade agreement with the Soviet Union to exchange fruits, vegetables, and minerals for manufactured goods and industrial equipment. Trade agreements also were signed with Czechoslovakia and Spain in January, and negotiations were conducted with a visiting Hungarian trade mission in June. In July, Tom Mboya, Kenya's minister of economic development and planning, and Bruce McKenzie, the Kenyan minister of agriculture, discussed with Malagasy officials the possibility of expanding trade.

African Unity. The Malagasy Republic became a member of the 14-nation Organisation Commune Africaine et Malgache (OCAM), which was formed in February 1965 within the framework of the 34-nation Organization of African Unity (OAU). The OCAM seeks to strengthen cooperation and solidarity among the member states in order to speed up their political, economic, technical, and social development. (See AFRICA.)

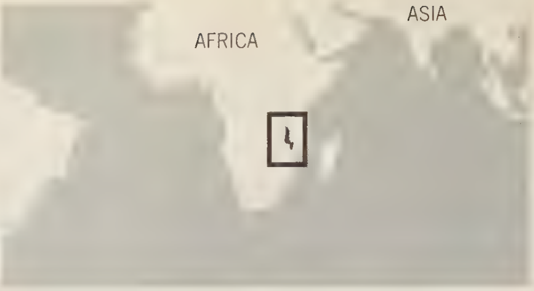
President Tsiranana led OCAM's opposition to the intrusion of Communist China into African affairs. The Malagasy Republic, which has more than 15,000 non-Communist Chinese residents, has diplomatic relations with Nationalist China, but does not officially recognize Communist China.

FRANKLIN PARKER
Professor of Education
University of Oklahoma

MALAGASY REPUBLIC · Information Highlights

Area: 230,035 square miles.
Population: 6,180,000 (July 1, 1964, est.).
Chief Cities (1959 est.): Tananarive, the capital (1962 est.), 270,268; Tamatave, 39,627; Fianarantsoa, 36,189; Majunga, 34,119.
Government: *President*—Philibert Tsiranana (took office May 1, 1959); *Vice President*—Calvin Tsiebo. *Parliament*—Senate, 54 members (18 appointed; 36 elected); National Assembly, 107 members; party seating (1965)—Social Democratic, 98; Movement for National Revival, 6; Congress Party, 2; vacant, 1.
Religious Faiths: Tribal religions, 50% of population; Roman Catholics, 20%; Protestants, 18%; Muslims, 8%; others, 4%.
Education: *Total school enrollment* (1963)—594,950 (primary, 549,770; secondary, 44,050; higher, 1,130).
Finance (1963): *Revenues,* $96,100,000; *expenditures,* $96,100,000; *public debt,* $684,000; *monetary unit,* Malagasy franc (246.85 francs equal U.S.$1).
National Income (1962): $489,800,000; average annual income per person, $85.
Economic Index: *Cost of living* (1964), 100 (1964=100).
Manufacturing (metric tons, 1963): Sugar, 115,000; cement, 41,000; beer, 25,100 hectoliters; lumber, 45,000 cubic meters.
Crops (metric tons, 1963–64 crop year): Rice (1964–65), 1,250,000 (ranks 15th among world producers); cassava, 850,000 (world rank, 9th); coffee (1964–65), 63,000 (world rank, 12th); sweet potatoes and yams, 280,000; bananas, 150,000; maize, 90,000; potatoes, 70,000; beans, 45,000.
Minerals (metric tons, 1964): Salt, 17,000; graphite, 15,797; chromite (1963), 12,000; ilmenite, 3,000; coal (1963), 2,000; monazite (1963), 686; mica, 682.
Foreign Trade (1963): *Exports,* $82,000,000 (chief exports: coffee, $22,700,000; sugar and honey, $9,000,000; sisal, $7,300,000; rice, $5,400,000); *imports,* $127,400,000 (chief imports: motor vehicles, $11,700,000; nonelectrical machinery, $10,300,000; woven cotton fabrics, $10,000,000). *Chief trading partners:* France (took 52% of exports, supplied 74% of imports); U.S. (took 17% of exports, supplied 3% of imports); West Germany (took 4% of exports, supplied 3% of imports).
Transportation: *Roads* (1964), 24,855 miles (1,243 paved); *motor vehicles* (1964), 51,308 (automobiles, 27,021); *railways* (1963), 535 miles; *merchant vessels* (1964), 6 (18,000 gross registered tons); *principal airport,* Tananarive.
Communications: *Telephones* (1964): 17,631; *radios* (1963), 285,000; *newspapers* (1962), 12 (daily circulation, 53,000).

MALAWI



Major developments in Malawi in 1965 included politically inspired violence in Fort Johnston, a dispute with neighboring Tanzania over the harboring of Malawi rebels, charges of subversion against Communist China, and the effects of Rhodesia's independence.

Fort Johnston Riots. Prime Minister Hastings K. Banda successfully weathered a revolt by half of his cabinet in 1964. In 1965, opposition to his allegedly arbitrary rule was centered in Fort Johnston, where riots and mass arrests occurred in February, and order was not restored until March. The leading challenger to Banda's authority was the former minister of education, Henry M. Chipembere, who escaped from detention at his Fort Johnston home and reportedly took refuge with other exiles in Tanzania. On May 22, Prime Minister Banda announced that Chipembere had fled to the United States.

Dispute with Tanzania. Banda charged President Julius K. Nyerere of Tanzania with harboring Malawi rebels and aiding their plots to overthrow the Malawi government. On June 16, President Nyerere admitted sheltering Malawi refugees but denied aiding them in their opposition to Banda.

Charges Against Communist China. On July 6, Banda charged Communist China with supplying money and arms to Malawi rebels and providing them with subversive training. In a nationwide broadcast on October 10, he further charged Communist China with plotting to overthrow his regime in favor of Kanyama Chiume, former Malawi foreign minister living in exile in Tanzania. Banda said that Communist China had trained 80 men in China,

MALAWI · Information Highlights

Area: 46,066 square miles.
Population: 3,900,000 (1964 est.).
Chief Cities (1965 est.): Zomba, the capital, 14,000; Blantyre-Limbe, 58,400.
Government: *Governor-General*—Sir Glyn Jones (took office July 6, 1964); *Prime Minister*—Hastings K. Banda (took office July 6, 1964). *Parliament*—53 members; party seating (1965): Malawi Congress Party, 50; Nyasaland Constitutional Party, 3.
Religious Faiths: Tribal religions, Muslims, and others, 81% of the population; Roman Catholics, 19%.
Education: *Literacy rate* (1960)—6% of African population aged 14 and over. *Total school enrollment* (1962)—332,331 (primary, 327,834; secondary, 2,587; teacher-training, 1,269; technical and vocational, 641).
Finance (1963): *Revenues,* $35,100,000; *expenditures,* $36,200,000; *monetary unit,* pound (0.3571 pound equals U.S.$1).
Gross National Product (1963): $128,500,000.
Manufacturing (metric tons, 1964): Cement, 31,000.
Crops (metric tons): Tea (1964–65), 12,400 (ranks 11th among world producers); maize (1963–64), 907,000; tobacco (1964–65), 17,400; cottonseed (1963–64), 8,000.
Foreign Trade (1964): *Exports,* $35,000,000 (chief exports: tea, tobacco); *imports,* $45,000,000. *Chief trading partner:* Britain.
Transportation: *Roads* (1964), 6,365 miles (288 paved); *motor vehicles* (1964), 13,028 (automobiles, 7,878); *railways* (1963), 316 miles; *civil airline,* Air Malawi; *principal airport,* Blantyre-Limbe.
Communications: *Telephones* (1964), 6,533; *radios* (1962), 3,000.

WIDE WORLD

MALAWI YOUTHS work on a pineapple plantation near Blantyre as part of their training in the government-sponsored Back to the Land Movement. Malawi hopes to diversify its agriculture as a means of increasing its export trade.

Cuba, and Algeria to spread subversion in Malawi.

Effects of Rhodesian Independence. The Malawi government announced on November 17 that its trade agreement with Rhodesia was abrogated because of Rhodesia's declaration of independence from England. The government stated that it would impose custom duties on a wide range of Rhodesian products previously admitted into Malawi free of duty.

In December, Prime Minister Ian Smith of Rhodesia announced that henceforth Rhodesia would demand payment in U.S. or Canadian dollars or Western currency for goods it supplies to Malawi. Smith's government also announced that it would expel immigrant African laborers who become unemployed as a result of Rhodesia's falling exports. Approximately 200,000 Malawians work in Rhodesia.

Capital Relocation. Banda went ahead in 1965 with his plan to relocate the national capital 10 miles north of Lilongwe, which is 200 miles north of the present capital at Zomba. Since Lilongwe is in the nation's grain belt and lacks industrial development, one stated purpose of the proposed move is to draw economic development to the central region and provide needed employment. However, critics of Banda's plan, which will cost a minimum of $16.8 million, suggest that the prime minister's real purpose is to have the capital nearer the sources of his own political support. Former government offices in Zomba will be used to house the University of Malawi, now situated at Blantyre, near Zomba.

Governmental Changes. After Malawi celebrated the first anniversary of its independence on July 6, Banda announced (July 20) that Malawi would become a republic within the Commonwealth of Nations on July 6, 1966. His announcement was confirmed by the annual conference of the ruling Malawi Congress party on October 17, at which Banda was unanimously elected president-designate. The conference also approved the new republican constitution, which provides for a president as sole head of state but not for a vice president or premier.

Diplomatic Appointment. On May 12, Banda announced the appointment of Vincent Gondwe to replace David Rubardi as Malawi's ambassador to the United States and as permanent representative to the United Nations.

Economic Developments. Late in 1964, Banda obtained aid from Britain, the United States, and the United Nations to implement Malawi's $126 million five-year development plan. Britain has contributed $33.6 million to Malawi for various projects since 1964, and the United States has assigned $500,000 for a polytechnic institution. France, West Germany, Canada, and Israel also have either given or promised aid for development projects.

New plants opened in Malawi in 1965 included a $2.8 million sugar refinery at Nchala and a $2.8 million textile mill in Blantyre. Construction was begun on a hydroelectric project on the Shire River, scheduled for completion in 1966.

Landlocked Malawi, whose per capita income of $48 a year is one of the lowest in Africa, has a railway link with Mozambique on the Indian Ocean. A second rail link with Mozambique was being contemplated in August 1965, but no decision had been made by the end of the year.

FRANKLIN PARKER
Professor of Education, University of Oklahoma

MALAYSIA

The two-year-old federation of Malaysia was confronted with its gravest internal crisis in the summer of 1965, when mounting tension between the federal government in Kuala Lumpur and the constituent state of Singapore resulted in Singapore's enforced withdrawal from the federation. Relations with the federal government also were strained in the two Bornean states of Sabah and Sarawak, and considerable dissatisfaction was voiced there over Kuala Lumpur's failure to consult them on so vital a decision. After the Singapore-Malaysia split, pressures for greater autonomy or separation were felt in both Bornean states.

Meanwhile the external threat of Indonesia's policy of "confrontation" with Malaysia continued, chiefly in irritant border raids in Sabah and Sarawak. But internal problems in Indonesia, resulting from the coup and countercoup of October 1, reduced the immediate danger of that country's anti-Malaysian policy.

The Background. The roots of the Singapore-Malayan conflict were deep. At first, the original Federation of Malaya, independent since 1957, resisted the call for merger with the British colony of Singapore voiced by Singapore's governing People's Action Party (PAP). Malaya's conservative Alliance government of Prime Minister Tunku (Prince) Abdul Rahman feared the political radicalism endemic in Singapore and the prospect that its predominantly Chinese population would swamp the delicate Malay-Chinese racial balance at home.

In early 1961, Prince Rahman shifted his position. Fearing that the pro-Communist faction of the PAP might soon govern an independent Singapore, he endorsed a "Greater Malaysia" union in which the mixed population of the Bornean states would be drawn in to offset the Singapore Chinese. No sooner had the new state of Malaysia been proclaimed on Sept. 16, 1963, than the incipient political rivalry between the incumbent Alliance government in Kuala Lumpur and Singapore's PAP government, aggressively led by Prime Minister Lee Kuan Yew, became acute. In hastily called elections in Singapore, the PAP won a rousing endorsement.

Determined to expand its power base beyond Singapore, the PAP entered the April 1, 1964, parliamentary elections in Malaya to contest nine seats in urban constituencies with large Chinese populations. The apparent strategy was to demonstrate to Prince Rahman and his own party, the United Malays National Organization (UMNO), that the PAP had greater drawing power among Malaya's Chinese than the Malayan Chinese Association, a partner with UMNO in the multiracial Alliance coalition, and should replace it in the federal government. UMNO's leaders interpreted the PAP's challenge as an effort to make Lee Kuan Yew prime minister of Malaysia and assure Chinese political domination.

MALAYSIA · Information Highlights

ASIA
AUSTRALIA

Area: 128,430 square miles.
Population: 9,136,641 (June 30, 1964 est.), incl. Malaya, 7,810,205; Sarawak, 819,808; Sabah, 506,628.
Chief City (1963 est.): Kuala Lumpur, the capital, 316,230.
Government: *Paramount Ruler*—Prince Ismail Nasiruddin Shah (took office Sept. 21, 1965); *Prime Minister*—Prince Abdul Rahman (took office Sept. 16, 1963). *Parliament*—House of Representatives, 144 members; party seating, 1965: Alliance, 89; Alliance Sarawak, 18; Alliance Sabah, 16; Pan-Malayan Islamic, 9; others, 12; Senate, 60 members.
Religious Faiths: Muslims, more than 50% of population; Roman Catholics, 3%.
Education: *Literacy rates*—Malaya (1957), 47% of population aged 15 and over; Sabah (1960), 24%; Sarawak (1960), 22%. *Total school enrollment* (1963)—1,595,440 (primary, 1,320,855; secondary, 256,951; teacher-training, 653; technical, 8,411; higher, 8,570).
Finance (1964 est.): *Revenues*, $380,000,000; *expenditures*, $469,000,000; *monetary unit*, Malayan dollar (3.07 dollars equal U.S.$1).
Gross National Product (1964): $2,285,000,000 (Malaya only).
National Income (1962): $1,645,000,000 (Malaya only); average annual income per person, $223.
Manufacturing (metric tons): Cement (1964), 417,000 (incl. Singapore); gasoline (1963), 323,000 (Sarawak only); meat (1963), 38,400 (Malaya only).
Crops (metric tons, incl. Singapore): Rubber (1964), 897,900 (ranks 1st among world producers); rice (1963–64), 869,000 (rank, 19th); palm kernels (1963–64), 28,000 (rank, 8th); tea (1964), 2,900 (rank, 18th).
Minerals (metric tons, 1964, incl. Singapore): Iron ore, 6,568,000 (ranks 16th among world producers); bauxite, 639,000 (rank, 13th); tin, 60,967 (rank, 1st).
Foreign Trade (1964): *Exports*, $1,125,000,000 (chief exports, Malaya only: rubber, $407,000,000; tin, $203,000,000); *imports*, $1,067,000,000 (chief imports, 1963: nonelectrical machinery, $82,000,000; motor vehicles, $68,000,000. *Chief trading partners* (1963): Singapore (took 21% of exports, supplied 14% of imports); Britain (took 8% of exports, supplied 20% of imports).
Transportation (incl. Singapore): *Roads* (1964), 8,313 miles (6,424 paved); *motor vehicles* (1964), 180,004 (automobiles, 139,248); *railways* (1963), 1,124 miles; *airline*, Malayan Airways Ltd.; *principal airport*, Kuala Lumpur.
Communications: *Telephones* (1964): 109,913; *television stations* (1964), 2 (incl. Singapore); *television sets* (1964), 17,000 (incl. Singapore); *radios* (1962), 387,000; *newspapers* (1961), 44 (daily circulation, 502,000).

UPI

TUNKU ABDUL RAHMAN, prime minister of Malaysia, took the painful step in 1965 of demanding that Singapore withdraw from the Malaysian federation. The chief architect of the multiracial federation established in 1963, Prince Rahman had concluded that Singapore's departure was necessary to prevent communal strife between ethnic Chinese and Malays. With Singapore's Chinese asserting their political role, and militant Malay nationalists demanding repressive measures against them, the moderate prime minister, caught in the middle, felt that separation was the only alternative to bloodshed.

Rahman, a son of the sultan of Kedah, was born in Kedah, Malaya, on Feb. 8, 1903. He studied at Cambridge, England, in the 1920's and returned to England to take a law degree in 1949. Entering Malayan politics in the early 1950's, he formed the multiracial Alliance party. In 1957 he was elected prime minister of the newly independent Federation of Malaya. Six years later he formed Malaysia by federating Malaya with Singapore, Sabah, and Sarawak.

MALAYSIAN SOLDIERS stand guard as Chinese villagers take a communal bath after arriving at a resettlement camp at Kuching, Sarawak, in July 1965. The government moved 8,000 Chinese into such camps to protect them from Indonesian raiders and to ward off Communist influence.

UPI

Although the PAP won only a single parliamentary seat in the April 1964 election, UMNO's fears of its encroachment did not subside. The militantly pro-Malay faction in UMNO launched fresh attacks on Prime Minister Lee's administration. Two serious Malay-Chinese communal riots occurred in Singapore during the summer of 1964.

The Crisis. Early in 1965 the PAP and other dissident parties formed the Malaysian Solidarity Convention, which pledged a multiparty "crusade" for genuine interracial unity. Government leaders, drawing attention to the heavily Chinese composition of the convention's member parties, charged that its espousal of interracial unity concealed a militant Chinese communalism.

In May, stormy parliamentary debates were provoked by the PAP's censure motion against the government for failing to include a pledge of interracial unity in the Shah's address to parliament. A procession of Alliance leaders rose to castigate the PAP's divisive tactics, and some demanded that Prime Minister Lee, who was also a deputy in the federal Parliament, leave the House. Finance Minister Tan Siew Sin flatly asserted that cooperation between Kuala Lumpur and Singapore was impossible so long as Lee headed the Singapore government. In July the Alliance government expelled Alex Josey, a longtime British correspondent in Singapore and a close adviser to Lee Kuan Yew, for "interfering in Malaysia's internal politics and disrupting its interracial harmony." The PAP's subsequent charge that the federal government was planning to arrest Lee was indignantly denied in Kuala Lumpur.

In July, Prince Rahman, after attending the Commonwealth Prime Ministers Conference in London, made his crucial decision. Upon his return he held secret conversations with Lee, and on August 9, Singapore's departure was publicly announced.

The Aftermath. Shortly thereafter, the minister for Sabah affairs, Dato Donald Stephens, resigned from the federal cabinet, calling for wider autonomy for his home state. In Sarawak the radical opposition party, the Sarawak United People's Party (SUPP), called for a plebiscite on Sarawak's continued membership in the federation. As an alternative to the Malaysian federation, SUPP proposed a North Borneo federation to comprise Sabah and Sarawak and the British protectorate of Brunei, which had declined to join Malaysia in 1963.

Prime Minister Rahman warned that Sabah and Sarawak would not have the option of withdrawing from the federation. The presence of British defense forces, which constituted the only effective protection against Indonesia's incursions in North Borneo, probably was sufficient to induce the two states to remain in the federation for the time being. (See also ASIA; INDONESIA.)

Economy. Despite political turmoil, the Malaysian economy continues to prosper. In 1965 the gross national product grew by 8.5%, compared with 7.6% in 1964. Sustained demand for Malaysian rubber and tin accounted largely for the favorable balance of trade, estimated at over $99 million.

In November the government announced a greatly expanded five-year development plan to commence in 1966. An anticipated 42% increase in public sector expenditures, compared with the 1961–65 plan, would require a tripling of foreign assistance.

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MALDIVE ISLANDS

The Maldive Islands, an archipelago consisting of some 2,000 islands in the Indian Ocean southwest of Ceylon, achieved independence in 1965.

Independence. A self-governing sultanate formerly under British protection, the Maldive Islands became fully independent of Britain on July 26, 1965. An agreement signed at that time by Maldivian Prime Minister Ibrahim Nassir and British High Commissioner for Ceylon, Sir Michael Walker, replaced a 1960 treaty that had empowered Britain to act on behalf of the Maldivian government in foreign affairs. The new agreement also provided for British retention of a Royal Air Force base and other facilities on Gan Island in the southern Maldives.

Following its independence the Maldive Islands was admitted to the United Nations on Sept. 21, 1965. The Maldivian delegation, which includes

MALDIVIAN DELEGATES were congratulated when the flag of their newly independent country was raised at the UN Plaza in New York on Oct. 12, 1965. Participants in the ceremony included (l. to r.) UN Secretary-General U Thant, British Minister of State for Foreign Affairs Lord Chalfont, and Maldivian Delegate to UN, Ahamed Hilmy Didi (center).

UN

Ahamed Hilmy Didi as permanent representative and delegates Abdul Sattar and Ahmed Ismail, was formally welcomed into the United Nations on October 12.

Government. The government of the Maldive Islands is headed by a sultan (Amir Muhammed Farid Didi since Feb. 22, 1954), who is elected for life by the Majlis (Parliament). The sultan appoints a prime minister on the advice of the Majlis. The prime minister serves as minister of external affairs, public safety, education, finance, and public works.

The Majlis consists of 54 members, six of whom are appointed by the sultan; the remainder are elected by universal suffrage. It meets in the capital city of Malé.

People. The majority of the population in the archipelago, of which only 220 islands are inhabited, are Sunni Muslims of mixed Sinhalese, Arab, Malay, and Negro ancestry. Most of the people are engaged in fishing, the islands' principal industry.

Economy. Each year the Maldive Islands exports approximately $400,000 worth of Maldive fish—a mixture of bonito and tuna. Almost all the islands' trade is with Ceylon, although ambergris is sold in Bombay, India. Also exported are small quantities of coconuts, copra, coir, and tortoise shell. Malé Island is the chief commercial center.

MALI

ASIA
AFRICA
S. AMERICA

Mali negotiated with France in 1965 to obtain French backing of its currency without jeopardizing Mali's status as a completely independent country. A team of negotiators spent several months in Paris during the first half of the year, but the two countries reached no agreement on this delicate issue. However, France continued to supply some financial aid and technical assistance, including help to develop agriculture in the Upper Niger valley.

Economy. Increased rice and cotton production, major targets of the social and economic development plan launched in 1961, suffered a severe setback as the result of disastrous floods caused by unusually heavy rains in central Mali in August. However, through outside aid, some progress was made in the industrial sector of the development plan. The Soviet Union agreed to help build a 50,000-ton-capacity cement works; France pledged to invest in a radio receiver plant and a plastics factory in Bamako; Israel cooperated in exploiting solar energy; and Communist China committed itself to build a textile factory in Ségou.

Legislation. The National Assembly's spring session was devoted primarily to economic legislation. The laws passed aim to eliminate intermediaries from marketing agricultural produce, to strengthen consumer cooperatives, and to reduce fraud and smuggling in the agricultural markets.

Foreign Affairs. Mali signed a friendship treaty with Communist China during President Modibo Keita's lengthy trip to Asia in late 1964. The government insisted, however, that it had not abandoned its policy of nonalignment. This policy was demonstrated by Mali's continued friendly relations with France and other members of the European Economic Community. Also, after anti-American demonstrations by government-controlled labor unions in March, the minister of economic coopera-

MALI · Information Highlights

Area: 478,000 square miles (est.).
Population: 4,576,000 (July 1, 1965, est.).
Chief City (1963 est.): Bamako, the capital, 150,000.
Government: *President*—Modibo Keita (took office September 1960). *Parliament*—National Assembly, 80 members (all belonging to the Union Soudanaise party).
Religious Faiths: Muslims, 62% of population; tribal, 37%; Roman Catholics, 0.7%; others, 0.3%.
Education: *Total school enrollment* (1963)—81,225 (primary, 77,196; secondary, 3,297; teacher-training, 47; technical, 685).
Finance (1960): *Revenues,* $27,500,000; *expenditures,* $27,500,000; *monetary unit,* Mali franc (246.85 francs equal U.S.$1).
Manufacturing (metric tons, 1961): Meat, 10,000.
Crops (metric tons, 1963–64 crop year): Peanuts, 118,000 (ranks 17th among world producers); millet and sorghum, 940,000; rice, 190,000; maize, 70,000.
Foreign Trade (1964): *Exports,* $16,600,000 (chief exports: peanuts, $8,200,000; fish, $1,200,000; cotton, $600,000); *imports,* $36,600,000 (chief imports, 1963: woven cotton fabrics, $3,200,000; sugar and honey, $3,100,000; motor vehicles, $2,400,000). *Chief trading partner* (1963): France (took 21% of exports, supplied 52% of imports).
Transportation: *Roads* (1964), 7,420 miles (450 paved); *motor vehicles* (1964), 9,800 (automobiles 6,600); *principal airport,* Bamako.
Communications: *Telephones* (1964), 4,010; *radios* (1963), 10,000; *newspapers* (1960), 3 (daily circulation, 2,000).

tion, Hamaciré N'Douré, and the commissioner for youth and sports, Moussa Keita (the president's younger brother), made a goodwill visit to the United States in June.

Mali's relations with neighboring Mauritania improved after the two countries settled their border dispute. Relations also improved with Senegal following Mali's expulsion of a refugee Senegalese opposition group.

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MALTA

Malta attempted to forge an independent foreign policy and to make its mark on the international scene by joining several organizations in late 1964 and during 1965.

Foreign Affairs. After it had achieved its independence on Sept. 21, 1964, Malta was admitted as a member of the United Nations on December 1.

Malta was accepted as the 18th full member of the Council of Europe by the organization's Council of Ministers and Consultative Assembly on Jan. 25, 1965. Malta will have three seats in the Council's Consultative Assembly.

On August 4, George Feldman was sworn in as the first United States ambassador to Malta.

The North Atlantic Council of the North Atlantic Treaty Organization (NATO) and the government of Malta announced in Paris on November 3 that Malta had been included in the NATO defense network. NATO maintains on the island an important naval headquarters—Headquarters, Allied Forces Mediterranean, under Adm. John Hamilton.

Economy. The government of Malta hoped to create a competitive economic structure largely directed toward an export market. A second five-year plan (1964–69), costing $107.5 million, will emphasize new industry, increased tourism, and greater agricultural production.

MALTA · Information Highlights

EUROPE
ASIA
AFRICA

Area: 122 square miles.
Population: 320,000 (Jan. 31, 1965 est.).
Chief City (1963 est.): Valletta, the capital, 18,121.
Government: *Sovereign*—Queen Elizabeth II; *Governor-General*—Sir Maurice Dorman (took office Sept. 21, 1964); *Prime Minister*—Dr. Giorgio Borg Oliver (took office March 3, 1962). *Parliament*—Legislative Assembly, 50 members; party seating (1965): Nationalist Party, 26; Malta Labor Party, 16; others, 8.
Religious Faiths: Roman Catholics, 97% of population; others, 3%.
Education: *Literacy rate* (1963)—80% of adult population. *Total school enrollment* (1962)—71,642 (primary, 59,557; secondary, 10,715; teacher-training, 180; technical, 1,190).
Finance (1964–65 est.): *Revenues*, $57,118,000; *expenditures*, $59,180,000; *monetary unit*, pound (0.3571 pound equals U.S.$1).
Gross National Product (1964): $148,000,000.
National Income (1964): $128,000,000; average annual income per person, $395.
Cost of Living Index (1964): 116 (1958=100).
Manufacturing: Wheat flour (1963), 44,000 metric tons; wine (1962–63), 5,000 metric tons.
Crops (1963 values): Potatoes, $1,438,000; tomatoes, $707,000; grapes, $690,000; wheat, $288,000.
Minerals (metric tons): Lime (1963), 16,000; salt (1964), 1,800.
Foreign Trade (1963): *Exports*, $8,540,000 (chief exports: synthetic yarn fibers, $1,700,000; potatoes, $1,400,000; wine, incl. grape must, $675,000; soybean oil, $465,000); *imports*, $84,000,000 (chief imports: unmilled wheat, $4,900,000; meat and preparations, $3,500,000; lamp oil and white spirit, $2,400,000). *Chief trading partners:* Britain (took 35% of exports, supplied 39% of imports); Italy (took 10% of exports, supplied 9% of imports); Libya (took 11% of exports, supplied 0.7% of imports).
Transportation: *Roads* (1964), 565 miles; *motor vehicles* (1964), 25,859 (automobiles, 19,512); *merchant vessels* (1964), 3 (19,000 gross registered tons); *civil airline*, Malta Airlines; *principal airport*, Luqa.
Communications: *Telephones* (1964): 20,834; *television stations* (1964), 1; *television sets* (1964), 26,000; *radios* (1962), 73,000; *newspapers* (1963), 5.

MANGANESE. See MINING—*Mineral Production.*

MANITOBA

Except for Manitoba's role in developments on the national political scene, the year 1965 was comparatively uneventful. Only moderate progress was made in the province's economy.

Politics. The major political event of 1965 was the federal election of November 8, in which Manitoba's representation in the national House of Commons remained practically unchanged (10 Progressive Conservatives, 3 New Democrats, and 1 Liberal). However, Premier Roblin emerged as a potential leader of the national Conservative party. His knowledge of French and his cordial dealings

MANITOBA · Information Highlights

Area: 251,000 square miles.
Population: 960,000 (Oct. 1, 1965 est.).
Chief Cities (1964 est.): Winnipeg, the capital (256,613); St. Boniface (45,516); St. James (34,459); Brandon (29,500); St. Vital (29,373); East Kildonan (28,112); West Kildonan (21,000); Transcona (18,200); Portage la Prairie (12,900); Flin Flon (11,400).
Government: *Chief Officers*—lieutenant governor, Richard S. Bowles; premier and prov. treas., Dufferin Roblin (Progressive Conservative); prov. secy., Maitland B. Steinkopf (PC); atty. gen., Stewart E. McLean (PC); min. of educ., George Johnson (PC); chief justice, C.C. Miller. *Legislature*—Legislative Assembly (convened Feb. 22, 1965), 57 members (36 Progressive Conservative, 13 Liberal, 7 New Democratic Party, and 1 Social Credit).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 212,644 pupils (8,600 teachers); private elementary and secondary, 11,175 (559); Indian, 5,802 (236); college and university (1963–64), 9,114 students, all enrolled at the University of Manitoba in Winnipeg and Regina. *Public school expenditures* (1963)—$77,668,000; average teacher's salary, $4,437.
Public Finance (fiscal year 1965 est.): *Revenues*, $146,840,000 (income tax, $41,036,000; sales tax, $31,240,000; federal funds, $24,497,000). *Expenditures*, $177,920,000 (health and social welfare, $54,750,000; education, $44,100,000; transportation and communications, $27,000,000).
Personal Income (1964): $1,721,000,000; average annual income per person, $1,796.
Public Assistance (fiscal year 1965 est.): $18,460,000 (aged and blind, $4,010,000; dependents and unemployed, $7,850,000).
Labor Force (1961 census, agricultural and manufacturing only): *Agricultural*, 59,924; *manufacturing*, 44,287.
Manufacturing (1962): Value added by manufacture, $400,610,000 (transportation equipment, $26,025,000; primary metals, $91,860,000; nonelectrical machinery, $9,731,000; electrical products, $8,195,000; fabricated metals, $28,780,000; food and products, $95,330,000).
Agriculture (1964): *Cash farm income*, $296,173,000 (livestock, $127,100,000; crops, $166,456,000; govt. payments, $2,217,000). *Chief crops* (cash receipts)—wheat, $75,151,000 (ranks 3rd among the provinces); flaxseed, $29,311,000 (rank, 1st); barley, $7,694,000 (rank, 3rd); potatoes, $1,320,000 (rank, 7th).
Mining (1964 est.): *Production value*, $175,041,740. *Chief minerals* (tons)—copper, 29,192 (ranks 4th among the provinces); zinc, 42,671 (rank, 5th); cement, 364,421 (rank, 5th); sand and gravel, 9,667,983 (rank, 5th); crude petroleum, 4,370,000 barrels (rank, 4th); gold, 55,919 troy ounces (rank, 5th).
Transportation: *Roads* (1962), 42,020 miles (26,643 surfaced); *motor vehicles* (1963), 324,806; *railroads* (1963), 4,860 miles; *airlines* (1963), 3 (17 airports).
Communications (1963): *Telephones*, 324,488; *television stations*, 5; *radio stations*, 13; *newspapers*, 6 (daily circulation, September 1964, 215,874).

with Premier Lesage of Quebec—key factors in maintaining good relations between English- and French-speaking Canadians—have helped to increase his potential as a national leader.

The 1965 legislative session failed to solve the problem of state aid to private schools. There also was continued disagreement about the future of the metropolitan system of government for Winnipeg and its suburbs—one of North America's few experiments in supergovernment for large municipal areas.

Lieutenant Governor. Richard S. Bowles succeeded Erick Willis as Manitoba's lieutenant governor.

Economy. The economy showed a steady upward trend. Government investment in conservation and industrial development, and in organizations to stimulate trade produced some growth. Personal income, retail trade, manufacturing, and mineral output increased moderately, as did public revenues and expenditures. Agriculture recovered from the $35 million drop in farm cash income in 1964, and output rose 11% over 1963, to $430 million. Winter unemployment was at its lowest since 1956.

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MANUFACTURING. See ECONOMIC REVIEW; INDUSTRIAL PRODUCTION.

MAO TSE-TUNG. See biographical sketch under CHINA.

MARINE BIOLOGY

Interest in marine biology has increased since World War II, and the year 1965 showed continued evidence of growth in the field. A number of universities have planned marine stations for the education of student marine biologists, since existing educational facilities have not been able to meet the demand. At present, training in marine biology is provided by the Marine Biological Laboratory (Woods Hole, Mass.), the Scripps Institution of Oceanography (La Jolla, Calif.), the University of Washington (Seattle), the Marine Laboratory of the University of Miami (Fla.), the Narragansett Marine Laboratory of the University of Rhode Island (Kingston, R.I.), and other institutions.

Food-Chain Research. Food-chain research is an important aspect of biological oceanography. The intricate balance of life in the sea is dependent on the primary production of food by marine phytoplankton, the minute free-floating plants which are the "grass" of the sea. The Institute of Marine Resources at the Scripps Institution of Oceanography and the Woods Hole Oceanographic Institution are working on this research.

Excretion in Phytoplankton. J.A. Hellebust working with R.R.L. Guillard's culture collection of marine phytoplankton, has shown that most algae excrete 3 to 6% of their photoassimilated carbon during growth, and a few species excrete as much as 10 to 25%. In the experiments, algae varied less than 30% in their relative rates of excretion when they were subjected to two different light intensities, 3,000 and 25,000 lux. Algae exposed to direct sunlight (100,000 to 120,000 lux) had very high excretion rates, probably because of cell damage by photo-oxidation. It is common to have greater photosynthetic activity at 50- to 100-foot depths in the ocean than at the surface. Glycolic acid was one of the prominent organic products excreted, amounting in four different genera to 9 to 38% of the total carbon excretion. A few species excreted single compounds almost exclusively, such as proline, glycerol, or mannitol.

In addition to the utilization of this excreted organic matter as a source of energy and a specific nutrient for bacteria and some algae growing heterotrophically, it also may be very valuable as a chelating substance for binding trace metals in seawater. R. Johnston of the Aberdeen (Scotland) Marine Laboratory has shown by assays and mixed culture experiments that a proper supply of chelating substances is the most important factor in phytoplankton nutrition in seawater. G.E. Jones concluded that heavy metals are the most toxic factors for common coliform bacteria that enter the sea.

Uptake Measurement. Using radioactive organic compounds, R.T. Wright and J.E. Hobbie developed an interesting new way of measuring the uptake of small amounts of organic substances by planktonic microorganisms. Two mechanisms have been postulated after measurements over a range of substrate concentrations: (1) a transport system that becomes saturated at very low substrate concentrations; and (2) simple diffusion which shows a rather constant increase in velocity of uptake with increasing substrate concentration. The first mechanism is largely ascribed to bacterial populations, and the second to algal populations.

Marine Sampling. Doubts about the effectiveness of marine sampling have been confirmed by A. Fleminger and R.I. Clutter. They found that present sampling techniques do not accurately represent random distributions of planktonic animals in the sea. For example, larger nets must be used, since certain zooplankters, such as copepods and mysids, effectively avoid the present nets. Also, in the case of mysids, more are caught during darkness than during daylight hours, and, in proportion, dense populations give a higher yield than scattered populations.

Cancer Research. Sister Mary Rosarii Schmeer has shown that mice injected with a clam extract recovered from cancerous tumors 80 to 100% of the time, while untreated mice died within two weeks. C.P. Li and B. Prescott tested Sister Rosarii's extracts from clams as well as extracts prepared from abalones and oysters, and found in tests on mice that they inhibit several bacteria and viruses.

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MARINE CORPS

In Vietnam, the U.S. Marine Corps became involved in extensive combat operations in 1965 for the first time since the Korean War. The corps was authorized to increase its strength by 30,000 men, with a new 220,000-man level set for July 1966.

Vietnam. On March 8 the 9th Marine Amphibious Brigade from Okinawa landed by helicopter and surface craft at Danang, South Vietnam; it was the first major U.S. ground force sent to assist in the defense of that country. In April a battalion was established at Phu Bai, 40 miles north of Danang. In May, three battalions landed at Chu Lai, 60 miles to the south, and within a few days three squadrons of jet aircraft were operating from an airfield established there.

By midsummer, the 3rd Marine Amphibious Force in Vietnam consisted of 11 infantry battalions, 6 helicopter squadrons, 5 fixed-wing squadrons, and supporting forces totaling over 36,000 men.

MARINES man a roadblock in Santo Domingo, Dominican Republic, in May. On April 28, by order of President Johnson, the first of 4,200 Marines arrived on the island to prevent a possible Communist take-over during the war between the rebels and counterrevolutionaries.

UPI

Maj. Gen. Lewis W. Walt, commander of the force, assumed responsibility for U.S. support efforts throughout the critical northern portion (1st Corps area) of South Vietnam. In July another Marine battalion and a supporting helicopter squadron landed at Qui Nhon to provide airfield security pending the arrival of forces from Korea.

Initially, Marine activity was limited to supporting South Vietnamese armed forces and protecting the airfields at each of the four enclaves. But as their strength increased, the Marines launched hundreds of separate offensive actions ranging in size from four-man patrols and ambushes to full-scale regimental assaults against Vietcong threatening their positions. Marine commitments required relocating major units from bases in Okinawa, Japan, Hawaii, and California to Vietnam and nearby areas.

Marine forces also brought food, medical assistance, improved shelter, better education, stability, and hope to the Vietnamese people—services as important as military operations in determining the final outcome of the struggle.

Dominican Republic. On April 26 the 4th Marine Brigade, composed primarily of ground and aviation units, was ordered to the Dominican Republic to protect property and lives, assist in the evacuation of U.S. citizens, and preserve order. After more than a month of action, including sentry duty, patroling, and enduring sniper fire, the Marines began to withdraw after the rebels and counterrevolutionaries had observed a cease-fire.

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MARRIAGE AND DIVORCE

A spurt in the marriage rate began in the spring of 1963 and gained momentum after September, when the armed forces began deferring married men from the draft. The draft deferment was a factor in the record marriage rate of 1964. During that year 1,731,000 marriages took place.

By October 1964, the spurt in the marriage rate seems to have ended, with only small increases occurring through the early months of 1965. In June 1965, marriages dropped to 14.2 per 1,000 population, as compared with 14.6 the preceding June. The all-time peak in the United States marriage rate came at the close of World War II, when the rate was 16.4 per 1,000 (1946).

It is likely that the widespread discussion of the population explosion has been a factor in slowing down the marriage rate. Birth rates began dropping about three years ago and continued to drop in 1965. Births for the first six months of 1965 were 173,000 less than in the first six months of 1964. (See POPULATION TRENDS.)

U.S. MARRIAGE AND DIVORCE DATA: 1960–65

Year	Number of marriage licenses	Rate per 1,000 pop.[1]	Change in rate	Number of divorces	Rate per 1,000 pop.	Change in rate
1965	1,716,000[2]	8.8	−5.4%	473,000[3]	2.4	+4.3%
1964	1,731,000	9.3	+5.7%	446,000[3]	2.3	0.0%
1963	1,656,590	8.8	+3.5%	431,000	2.3	+4.5%
1962	1,580,045	8.5	0.0%	406,000	2.2	−4.3%
1961	1,555,000	8.5	0.0%	414,000	2.3	0.0%
1960	1,528,000	8.5	0.0%	409,000	2.3	3.3%

[1] Based on population excluding armed forces overseas. [2] Estimate based on licenses issued during the first four months. [3] Estimate based on divorces in 37 states for the first four months.

A flurry of marriages occurred in late August 1965, after President Johnson announced a deadline beyond which marriage would not be grounds for deferment from military service. Whether this development substantially affected the statistical trend of marriages could not be immediately determined.

Divorce rates in the U.S. rose during the early months of 1965, after having remained the same in 1963 and 1964. Divorces totaled 446,000 in 1964 and were expected to rise as high as 473,000 in 1965, if rates for the first four months continued.

In Canada, marriages rose to an all-time high in 1964, reaching a total of 138,135 marriages, compared with 131,111 in 1963. The marriage rate per 1,000 population rose from 6.9 to 7.2—the highest rate since 1960, though well below the U.S. rate.

The Canadian divorce rate rose slightly in 1964 to 8,589 divorces, as compared with 7,686 in 1963. The rate was .447 as against .407 the preceding year. The Western provinces of Yukon, Alberta, and British Columbia had the highest rates.

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MARSHALL, Thurgood. See biographical sketch under LAW.

MARYLAND

Maryland had its share of reapportionment problems during 1965. In March the legislature passed a new congressional districting plan for Maryland's eight districts. However, the implementation of the plan was halted by petition, and the voters will have to approve it in a referendum in the 1966 general election.

Legislative Reapportionment. The General Assembly met in a special session in October to deal with the problem of reapportioning the state legislature as a result of the Supreme Court's "one man, one vote" ruling in 1964. Unable to decide the issue, the legislature passed two bills. One based representation on population and came closest to meeting the Supreme Court order. The other increased Senate membership and guaranteed that each county would continue to have at least one senator. Governor J. Millard Tawes signed both bills, thus leaving up to the courts the issue of constitutionality and the question as to which bill should become law.

Legislation. During its regular 70-day session, the Maryland General Assembly approved a $767 million operating budget providing increases for health, education, welfare, and recreation, and a $31 million capital improvement budget, which included funds for aiding the economy of southern Maryland. It also passed an education program establishing regional community colleges and vocational schools and an expanded scholarship program.

MARYLAND · Information Highlights

Area: 10,577 square miles.
Population: 3,480,000 (1965 est.).
Chief Cities (1965 est.): Annapolis, the capital (27,500); Baltimore (925,000); Dundalk (85,000); Silver Spring (80,000); Bethesda (76,000); Wheaton (63,000); Towson (48,500); Parkville (47,800).
Government: *Chief Officers*—governor, J. Millard Tawes (Democrat); lt. gov., none; secy. of state, Lloyd L. Simpkins (D); atty. gen., Thomas B. Finan (D); treas., John A. Leutkemeyer; supt. of pub. instr., William J. Peeples; chief justice, Stedman Prescott. *Legislature*—General Assembly (convened Jan. 19, 1965); Senate, 28 members (21 Democrats, 7 Republicans); House of Delegates, 142 members (117 D, 25 R).
Education: *School enrollment* (1964–65)—public elementary, 438,470 pupils (15,192 teachers); public secondary, 320,405 pupils (13,812 teachers); nonpublic schools, 156,400 pupils (5,100 teachers); college and university (fall 1964), 85,027 students. *Public school expenditures* (1964–65)—$341,559,000 ($503 per pupil); average teacher's salary, $6,727.
Public Finance (fiscal year 1965): *Revenues*, $724,900,000 (3% sales tax, $113,733,000; motor fuel tax, $80,476,000; federal funds, $106,562,000). *Expenditures*, $721,600,000 (education, $214,025,000; health, welfare, and safety, $166,333,000; highways, $179,635,000). *State debt*, $329,651,000 (June 30, 1965).
Personal Income (1964): $9,838,000,000; average annual income per person, $2,867.
Public Assistance (fiscal year 1965): $52,979,068 to 113,839 recipients (aged, $6,445,555; dependent children, $30,434,407).
Labor Force (employed persons, June 1965): *Agricultural*, 33,600; *nonagricultural* (wage and salary earners), 1,190,500 (22% manufacturing, 20% trade, 15% government). *Unemployed persons* (June 1965)—42,700.
Manufacturing (1963): Value added by manufacture, $2,978,013,000 (transportation equipment, $402,367,000; primary metals, $515,518,000; nonelectrical machinery, $140,569,000; electrical machinery, $295,114,000; fabricated metals, $156,545,000; food and products, $401,857,000).
Agriculture (1964): *Cash farm income*, $291,359,000 (livestock, $193,557,000; crops, $92,340,000; govt. payments, $5,462,000). *Chief crops* (tons)—corn for grain, 762,000 (ranks 20th among the states); barley, 99,300 (rank, 17th); apples, 35,500 (rank, 19th); tobacco, 19,500 (rank, 8th); rye, 13,800 (rank, 15th); peaches, 11,500 (rank, 16th); hay, 609,000.
Mining (1964): *Production value*, $73,893,000 (ranks 36th among the states). *Chief minerals* (tons)—sand and gravel, 15,041,000; stone, 13,348,000; bituminous coal, 1,136,000; clays, 635,000; natural gas, 1,381,000,000 cubic feet.
Fisheries (1964): *Commercial catch*, 70,024,264 pounds ($11,774,056). *Leading species*—blue crab, 25,080,680 pounds ($2,877,011); soft clams, 8,164,332 pounds ($1,673,911); oysters, 8,104,516 pounds ($5,493,197); menhaden, 5,706,325 pounds ($91,139).
Transportation: *Roads* (1965), 23,092 miles (19,442 paved); *motor vehicles* (1965), 1,446,692; *railroads* (1965), 2,000 miles; *airlines* (1965), 13 (123 airports).
Communications (1965): *Telephones*, 1,661,200; *television stations*, 7; *radio stations*, 62; *newspapers*, 12 (daily circulation in 1964, 755,550).

The state's first minimum-wage bill was enacted in 1965. It set the minimum wage at $1 an hour, but exempted a number of specific jobs. The legislature also enacted a fair-employment bill reflecting provisions of the federal Civil Rights Act of 1964.

Important bills defeated by the 1965 session (besides reapportionment) proposed a second Chesapeake Bay Bridge, revolving-credit curbs, fair-housing and public accommodation laws, and an educational television network.

Commissions. A governor's commission, named to suggest revisions in Maryland's 98-year-old-constitution, recommended a constitutional convention, rather than piecemeal amendments, as the best method for bringing about constitutional revision.

A commission on state and county finance, set up to study the problem of providing additional revenue for the city of Baltimore and for Maryland's 23 counties, completed its report. The report will be the basis for the governor's financial recommendations to the General Assembly in 1966.

Education. The U.S. Office of Education announced that all of Maryland's 24 local school systems had complied with the 1964 Civil Rights Act and had qualified for federal funds. To qualify, 18 counties were required to furnish plans to make school assignments without regard to race.

Important Court Decisions. In 1965 the U.S. Supreme Court struck down Maryland's movie censorship law, ruling that its procedures posed a serious threat to freedom of expression. The invalidating feature of the Maryland statute was that it failed to guarantee a prompt judicial review of the censor's actions.

The Maryland State Court of Appeals ruled that it is unconstitutional for Maryland jurors to swear to a belief in God. The court ordered that its decision would apply retroactively only to cases in which a conviction had not yet become final.

MAURICE E. O'DONNELL
Assistant Professor of Government and Politics
University of Maryland

MASSACHUSETTS

Through much of 1965 the government of Massachusetts was embroiled in a debate about taxation. The General Court (legislature) sat throughout the year—a record in the history of the state—but failed to enact a new tax program.

Tax Debate. The tax debate centered on two points: the need for less dependence on the property tax, which is the fiscal backbone of the cities and towns, and the best means of financing the expansion of state services. Republican Gov. John A. Volpe and the Republican minority in the General Court pressed for the enactment of a 3% sales tax, while the Democratic majority favored an increase in the existing state income tax. The total amount needed was estimated at $200 million by both Governor Volpe and Senate President Maurice A. Donahue, a Democrat and the leading advocate of an increased income tax.

Legislative Action. The General Court passed a law aimed at preventing parking-ticket fixing, set up procedures for preservation of the coastal wetlands, and passed four state constitutional amendments that will be voted on in a referendum in November 1966. The amendments provide for the joint election of the governor and lieutenant governor, some home rule for cities and towns, industrial development through the use of public funds, and reorganization of the executive branch by gubernatorial action subject to legislative veto.

Civil Rights. Civil rights was the focus of some activity in the state during 1965. Most of the problems centered on the Boston schools, but charges of police brutality in Springfield resulted in demonstrations there.

A commission working in the field of education found that racial imbalance in schools is harmful, and recommended legislation to outlaw such imbalance. This was done, and Massachusetts became the first state to take such action. The imbalance was most prevalent in Boston, but the commission, headed by Commissioner of Education Owen Kiernan, also found some imbalanced schools in other cities, notably Springfield and New Bedford.

Corruption. Although less significant than in some previous years, corruption continued to be a focus of public concern. The Massachusetts Crime Commission, which expired on June 30, made a series of recommendations that the General Court began to study. Of the cases growing out of the commission, the most significant to come to trial during the year were those of former Gov. Foster Furcolo, who was acquitted of conspiracy, and of three members of the 1959–61 Executive Council, who were convicted of charges of conspiracy and bribery. Two of the three men were still members of the council until they resigned after the trial.

WIDE WORLD

GOVERNOR VOLPE OF MASSACHUSETTS shows bill he signed August 18 banning racial imbalance in public schools.

MASSACHUSETTS · Information Highlights

Area: 8,257 square miles.
Population: 5,387,000 (1965 est.).
Chief Cities (1965 est.): Boston, the capital (670,000); Worcester (180,000); Springfield (174,000); Cambridge (104,000); New Bedford (98,500); Fall River (94,000); Newton (93,000); Lynn (92,000).
Government: *Chief Officers*—governor, John A. Volpe (Republican); lt. gov., Elliot L. Richardson (R); secy. of state, Kevin H. White (Democrat); atty. gen., Edward W. Brooke (R); treas., Robert Q. Crane; comm. of education, Owen B. Kiernan; chief justice, Raymond S. Wilkins. *Legislature*—General Court (convened Jan. 6, 1965); Senate, 40 members (27 Democrats, 13 Republicans); House of Representatives, 240 members (167 D, 69 R, 1 Independent, 3 vacancies).
Education: *School enrollment* (1964–65)—public elementary, 627,000 pupils (23,300 teachers); public secondary, 410,000 pupils (18,800 teachers); nonpublic schools, 299,700 pupils (9,910 teachers); college and university (fall 1964), 189,044 students. *Public school expenditures* (1964–65)—$480,000,000 ($502 per pupil); average teacher's salary, $6,950.
Public Finance (fiscal year 1965): *Revenues*, $924,425,875 (motor fuel tax, $90,889,860; federal funds, $224,862,216). *Expenditures*, $910,205,794 (education, $160,214,828; health, welfare, and correction, $329,352,147; highways and waterways $181,764,612). *State debt*, $797,696,000 (June 30, 1965).
Personal Income (1964): $15,828,000,000; average annual income per person, $2,965.
Public Assistance (fiscal year 1965): $206,101,930 to 127,096 cases (aged, $57,962,109; dependent children, $54,234,714).
Labor Force (employed persons, July 1965): *Agricultural*, 23,000; *nonagricultural* (wage and salary earners), 2,028,200 (32% manufacturing, 20% trade, 14% government). *Average number of unemployed persons* (1964)—129,500.
Manufacturing (1963): Value added by manufacture, $6,365,008,000 (transportation equipment, $243,387,000; primary metals, $200,493,000; nonelectrical machinery, $722,107,000; electrical machinery, $965,798,000; fabricated metals, $454,665,000; food and products, $502,039,000).
Agriculture (1964): *Cash farm income*, $163,914,000 (livestock, $94,105,000; crops, $69,159,000; govt. payments, $650,000). *Chief crops* (tons)—cranberries, 32,500 (ranks 1st among the states); tobacco, 2,700 (rank, 15th); hay, 288,000; potatoes, 67,700; apples, 67,200; peaches, 3,700; corn for grain, 3,500.
Mining (1964): *Production value*, $36,367,000 (rank, 43rd). *Chief minerals* (tons)—sand and gravel, 21,341,000; stone, 6,519,000; lime, 171,000; clays, 138,000.
Fisheries (1964): *Commercial catch*, 409,630,214 pounds ($35,190,441). *Leading species*—yellowtail flounder, 70,933,339 pounds ($4,876,011); large haddock, 61,643,251 pounds ($6,632,352); round whiting, 56,303,425 pounds ($1,215,270); scrod haddock, 52,428,688 pounds ($4,906,342).
Transportation: *Roads* (1964), 25,372 miles; *motor vehicles* (1965), 2,036,637; *railroads* (1964), 3,204 miles; *airlines* (1965), 13 (49 airports).
Communications: *Telephones* (1965), 2,747,300; *television stations* (1964), 9; *radio stations* (1964), 87; *newspapers* (1965), 48 (daily circulation in 1964, 2,337,771).

Education. Much of the attention in the state was focused on the report of the Commission on Improving and Extending Educational Facilities, commonly called the Willis Commission. The Willis Report, based on a survey of all phases of education in the state, called for the complete reorganization of the Department of Education, the establishment of a new Board of Higher Education, a Board of Education with new membership, and far-reaching plans for establishing higher standards of public school education in the Commonwealth. The first three of these proposals were enacted by the General Court in June; it was assumed that implementation of the report would commit the state to greater expenditures in aid to local school systems.

The state's institutions of higher education continued to expand, both in enrollment and facilities. In 1965 the University of Massachusetts decided to build a new medical school in Worcester.

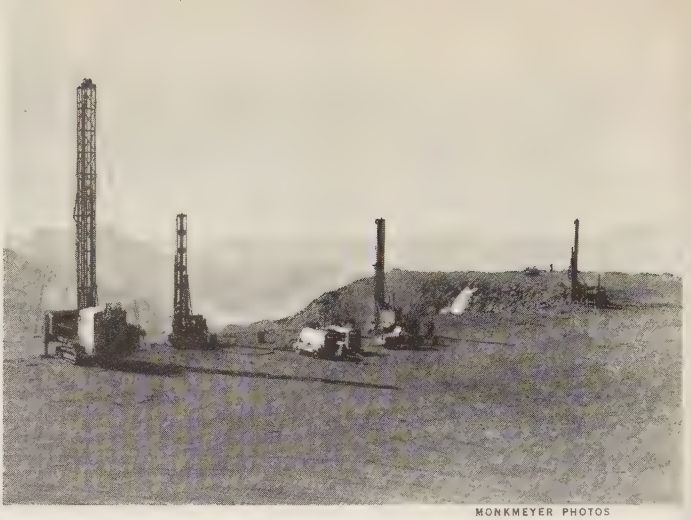
One of the most interesting experiments in higher education in the United States, the so-called Hampshire College, neared fruition when it received large endowment funds. The project has been planned by representatives of the faculties of four cooperating colleges in the Connecticut Valley: Amherst, Mount Holyoke, Smith, and the University of Massachusetts. (See also BOSTON.)

GEORGE D. BLACKWOOD
Professor of Political Economy, Boston University

MATTHAU, Walter. See biographical sketch under THEATER.

MAURITANIA

Mauritania continued its efforts in 1965 to develop an autonomous stand on major international issues. Although President Mokhtar Ould Daddah presided over the conference that led to the birth of the Organisation Commune Africaine et Malgache (OCAM) in Nouakchott in February, he withdrew Mauritania from the association of French-speaking



MONKMEYER PHOTOS

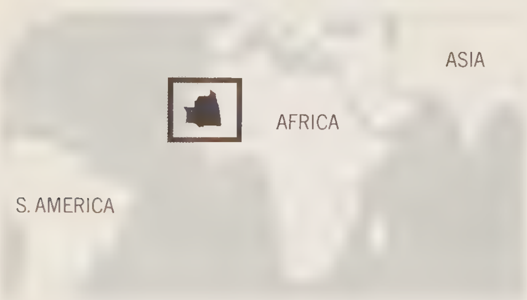
MAURITANIA'S IRON ORE DEPOSITS are being developed under a loan from the World Bank. Ore mined in the Sahara at Fort Gouraud (*above*) is shipped to Port Étienne (*left*) for export.

African states in July because he felt it rivaled the Organization of African Unity (OAU).

Economy. For the first time since its independence in 1960, Mauritania announced that economic conditions enabled it to balance its current budget without direct subsidies from France.

The International Development Association, an affiliate of the World Bank, announced that it was lending Mauritania $6.7 million of the $10 million needed to build a 125-mile highway from Nouakchott, the capital, to Rosso, on the Senegalese border.

MAURITANIA · Information Highlights



Area: 406,400 square miles.
Population: 1,000,000 (July 1, 1964 est.).
Chief Cities (1964 est.): Nouakchott, the capital, 12,500; Kaedi, 10,500.
Government: *President*—Mokhtar Ould Daddah (took office Aug. 20, 1961). *Parliament*—National Assembly, 40 members; party seating (1965)—all belonging to Parti du Peuple Mauritanien.
Religious Faiths: Muslims, 99% of population; Roman Catholics, 0.3%; others, 0.7%.
Education: *Total school enrollment* (1962–63)—19,257 (primary, 18,000; secondary, 1,190).
Finance (1964): *Revenues,* $15,500,000; *expenditures,* $16,-300,000; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).
Gross Domestic Product (1958): $65,000,000.
Principal Crop (metric tons, 1963–64 crop year): Dates, 10,000.
Minerals (metric tons): Iron ore (1964), 4,560,000; salt (1963), 600.
Foreign Trade (1964): *Exports,* $45,800,000 (chief export: iron ore, $43,100,000); *imports,* $15,700,000 (chief imports, 1963: nonelectrical machinery, $7,100,000; motor vehicles, $3,700,-000; rails and railroad track, $2,100,000). *Chief trading partners* (1963): France (took 68% of exports, supplied 69% of imports); Congo (Brazzaville) (took 18% of exports); U.S. (supplied 12% of imports).
Transportation: *Roads* (1964), 3,669 miles (18 paved); *motor vehicles* (1964), 4,489 (automobiles, 1,532); *railways* (1963), (1963), 419 miles; *state airline,* Air-Mauritanie; *principal airport,* Nouakchott.
Communications: *Telephones* (1964): 802; *radios* (1963), 30,000; *newspapers* (1964): *Mauritanie Nouvelle,* weekly.

Elections. Officially a one-party state, Mauritania held elections in May to fill 40 seats in the National Assembly. In the absence of opposition candidates, the Mauritanian People's party, the official state party, obtained 95% of the votes; the remaining 5% abstained.

Foreign Affairs. Mauritania accepted a Chinese Communist ambassador and broke off relations with the Chinese Nationalists in September.

In January the United States appointed its first ambassador to Mauritania, Geoffrey Lewis.

Aristide R. Zolberg
Assistant Professor of Political Science
University of Chicago

MEAT INDUSTRY

In 1964, Americans ate an average of 174.8 pounds of meat per person. This record-breaking total included about 100 pounds of beef, 65 pounds of pork, 5 pounds of veal, and 4 pounds of lamb and mutton.

Meat production in the United States in 1964 rose to a record high of about 32.7 billion pounds, almost 2 billion pounds higher than in 1963. Included in the 1964 production were 18.5 billion pounds of beef (dressed weight), 12.5 billion pounds of pork, 1 billion pounds of veal, and 700 million pounds of lamb and mutton. Sales of the meat industry totaled $14 billion in 1964, and net profits were $166 million or slightly more than 1 cent per dollar of sales.

Meatpacking ranks as one of the nation's largest industries. More than 4,000,000 farmers and ranchers produce the livestock processed at 4,500 meatpacking and processing plants. Meat is sold at an estimated 232,000 retail outlets, supplied by about 5,000 wholesale distributors. The sale of livestock accounts for about one third of total cash income of American farmers and ranchers.

The meat industry has found many uses for animal byproducts. Hides, lard, tallow, pharmaceuticals, and other byproducts are sold in the United States and abroad, enabling the packer to recover some of the production costs that otherwise would be added to the price of meat.

Herbert B. Bain
Director of Public Relations
American Meat Institute

MEDICARE

President Lyndon Johnson signed the Social Security Amendments of 1965—the Medical Care for the Aged, or Medicare, program—on July 30, 1965, in the Truman Library at Independence, Mo. By signing the bill in the presence of former President Harry S Truman, Johnson acknowledged the fact that Truman was the first president to propose federal health insurance under Social Security.

The program created by the Medicare bill (Public Law 89–97) is intended to bring a wide range of health and medical services within the financial reach of all Americans 65 years of age and over. Long sought by many persons concerned with the welfare of older people and hotly debated in an extended national dialogue, the Medicare Act was hailed by the president as "the most important addition [to Social Security] that has been made in three decades."

Provisions and Costs. The Medicare program contains three broad groups of provisions: (1) the basic insurance plan covering hospital care, extended care, home services, and outpatient diagnostic services; (2) a voluntary insurance program to provide payment for physicians' and surgeons' services, home health, and other services, costing each participant $3 a month in premium payments; and (3) a measure to assist needy older people in meeting expenses not covered by the first two programs.

The provisions of the three programs become effective between July 1, 1966, and Jan. 1, 1970, depending on the time required by federal and state governments and participating agencies to develop procedures. Most provisions of the two insurance programs are to take effect July 1, 1966.

Costs of the basic program will be met from Social Security contributions of 0.35% (rising to 0.80% by 1987) of the first $6,600 of earnings of employed workers, supplemented by general revenue appropriations for those workers not covered by Social Security. The cost of the voluntary program will be met by contributions of the insured, matched by contributions from general revenues. Costs of the assistance to the needy will be paid from general revenues of the federal and state governments.

The Basic Plan. The basic plan covers all persons aged 65 and over, except some retired employees of the federal government who are covered by other programs. It provides payment for hospital care; outpatient diagnostic services received in a hospital; posthospital home care; and posthospital extended care in a nursing home or similar facility.

Specifically, the basic plan provides for payment by the Social Security Administration of hospital care up to 90 days for each illness, except that the individual is required to pay the first $40. The individual also pays $10 for each day over 60 days. The plan covers the costs of semiprivate hospital room and board, operating and recovery rooms, drugs and biologicals administered in the hospital, and blood transfusions after the first 3 pints. An illness is presumed to begin when the patient enters a hospital and to end after the patient has remained out of a hospital or extended care facility for 60 consecutive days.

The basic plan also provides for 20-day periods of outpatient diagnostic services in the hospital, with the individual paying the first $20. The patient pays 20% of any charges above $20 during this 20-day period. When a patient has returned home after 3 or more days in a hospital, he may receive up to 100 home calls by a visiting nurse, therapist, or other health worker, but not by a physician or housekeeper. The patient is also entitled to 20 days of posthospital extended care in a qualified nursing home or similar facility, after he has spent three or more days in a hospital. If further care is needed, the basic plan will pay all but $5 daily for the next 80 days. The effective date of these programs is July 1, 1966, except for the posthospital extended care benefit, which becomes effective on Jan. 1, 1967.

WIDE WORLD

PRESIDENT JOHNSON SIGNS MEDICARE BILL in presence of ex-President Truman (*above*) on July 30, 1965. The president looks over enrollment card of Tony Palcaorolla (*below*), first person to enroll in Medicare program.

UPI

The Voluntary Plan. The supplementary plan covers all persons aged 65 and over who pay the premium of $3 per month—a sum that is matched by the federal government. During a calendar year, the individual pays the first $50 of the costs of supplies and services plus 20% of the costs above $50; the plan pays the remaining 80%. The coverage includes physicians' and surgeons' services, including surgery; consultation; home, office, and institutional calls; up to 100 home health service calls (without any requirement that the patient have had previous hospitalization), in addition to the 100 calls provided under the basic plan; diagnostic tests; X-ray or radium treatments; and other services and equipment such as surgical dressings.

Among items excluded under both plans are drugs for use outside of a hospital or extended care facility; routine physical examinations; and eyeglasses and eye examinations.

By October, about 85% of the application cards filled out and returned by those eligible to partici-

THE MEANING OF MEDICARE: Medical Care for the Aged (Medicare) became a reality in 1965. The program makes available to all Americans 65 years of age and older a wide range of health and medical services under two insurance plans:

BASIC COVERAGE

(To be financed through increased Social Security taxes)

HOSPITAL CARE

Plan provides for payment by Social Security Administration of hospital care up to 90 days for each illness, except that patient must pay first $40, plus $10 per day for each day over 60 days. Plan covers costs of semiprivate room, board, and drugs.

NURSING-HOME CARE

Enrollees are entitled to 20 days of posthospital care in a nursing home or similar facility, after having spent three or more days in a hospital. Plan also pays all but $5 per day of nursing-home care for next 80 days.

HOME NURSING CARE

After three or more days in hospital, patient is entitled to as many as 100 home visits by a nurse, therapist, or other health worker in each period of illness at no extra cost.

OUTPATIENT SERVICE

Plan provides for 20-day period of outpatient diagnostic service in hospital, the individual paying the first $20, plus 20% of any charges above $20 during any 20-day period, and the plan paying the remaining 80% of the cost.

SUPPLEMENTARY COVERAGE

(Under provisions of the voluntary insurance plan, the individual pays a premium of $3 per month, which is matched by the federal government. In a calendar year the individual pays the first $50 of the cost of supplies and services, plus 20% of any costs above $50; the insurance plan pays the remaining 80% of those costs.)

PHYSICIANS' CARE

Physicians' and surgeons' services, including surgery and consultations, at home, in the doctor's office, in a clinic, or in a hospital, are paid for by the voluntary insurance plan.

NURSING CARE AT HOME

Voluntary plan permits the individual to receive up to 100 visits each year by a nurse (in addition to the 100 visits provided for under the basic plan). There is no requirement that a patient have had previous hospitalization to qualify for these home nursing calls.

OTHER SERVICES

The plan pays the cost of X-rays and other diagnostic tests, radium treatments, ambulance service, and such equipment and supplies as casts, splints, and artificial limbs.

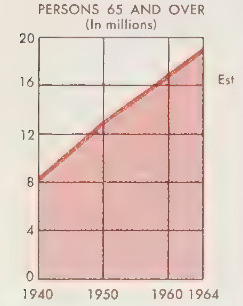
pate indicated a willingness to join the voluntary insurance plan. Social Security officials felt that the percentage would have been higher but for "groundless fears" of the participants that they would not be allowed to choose their own doctors.

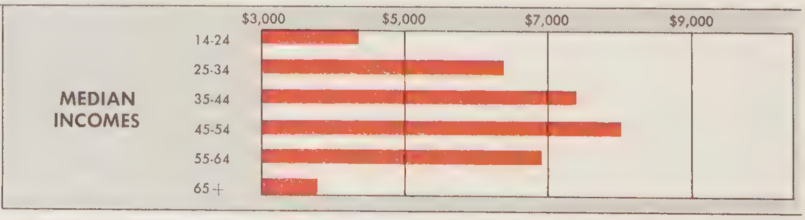
Aid to the Needy. To take care of those unable to pay, Congress amended Title XIX of the Social Security Act to permit financially needy older people to participate fully and to have the costs shared by the federal and state governments. This part of the new program authorizes states, with partial reimbursement from the federal government, to pay for all services not covered by the Medicare insurance plans for persons who meet state eligibility requirements. States participating in the program must pay up to 40% of the cost.

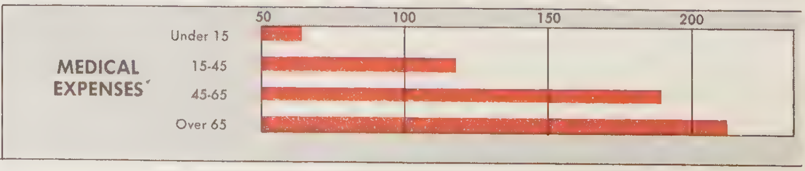
Administration of Medicare. It is hoped that controls built into the program will ensure care of the highest quality and a proper utilization of facilities. Referral to hospitals, extended care facilities, and home service programs must be certified by a physician. Hospital review panels will be required to scrutinize admissions, length of stay, and the medical necessity for services. Participating facilities must be accredited by responsible bodies and must be adequately staffed for the types of care they provide.

The Health Insurance Benefits Advisory Council, required by statute, was established late in the year, with Kermit Gordon, former U.S. budget director, as chairman. It began to advise the government on administrative policy matters and regulations. A national medical review committee will make an annual study of utilization of facilities and services and report to the secretary of health, education, and welfare. (See also OLD AGE; SOCIAL SECURITY.)

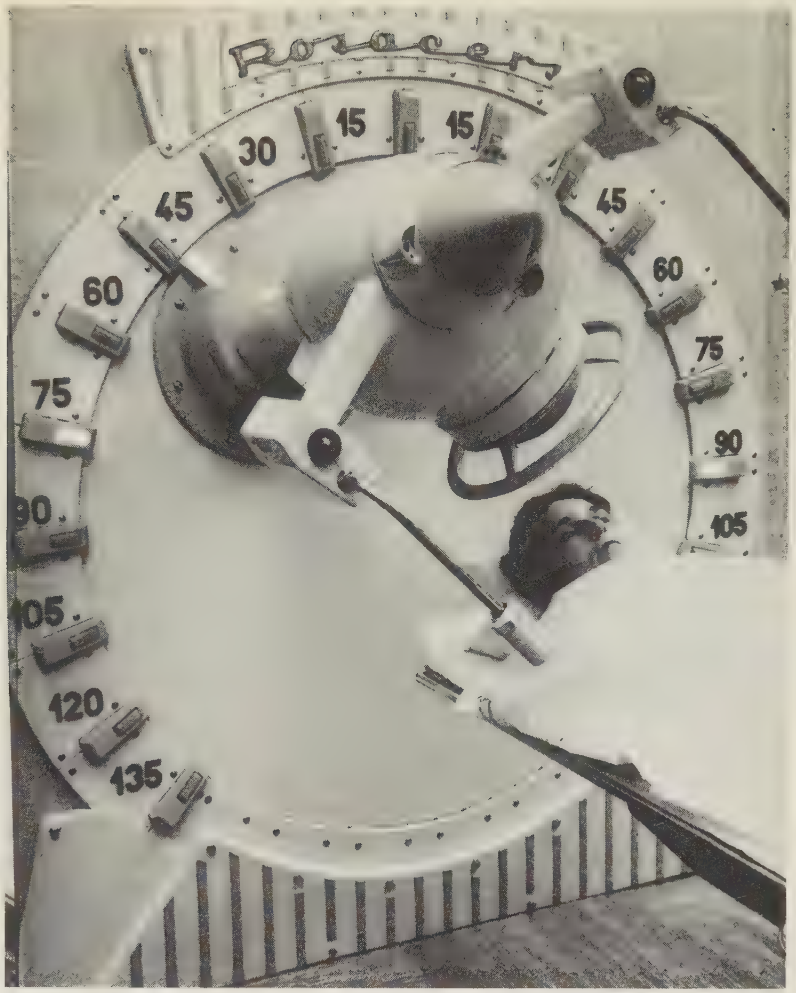
CLARK TIBBITTS
Administration on Aging
U.S. Department of Health, Education, and Welfare







MEDICINE



MEDICAL specialists in Hungary developed a radiation treatment method for cancer patients that minimizes the injury to healthy tissue. The apparatus, called a Rotacert, constantly rotates around the patient so that each dose of radiation takes a different path through healthy tissues and the site of a malignancy.

UPI

MEDICINE

Provisions for medical care in the United States were profoundly affected by social, economic, and political events in 1965. These developments may cause broad changes in traditional doctor-patient relationships.

Medical Programs in the United States. Legislation establishing the Medicare program for the elderly was enacted during the year. In addition, legislative coverage provided for new health programs for younger and older persons not covered by Social Security. Federal legislation also authorized a $340 million, three-year program to combat heart disease, cancer, and stroke. (See also MEDICARE.)

By the end of the year, much confusion still existed concerning the implementation of these extensive and expensive programs, and temporary overcrowding of hospitals appeared to be inevitable. The American Medical Association (AMA), which fought long and vigorously against federal health care plans financed by compulsory taxation, asked its members to cooperate in implementing Medicare and became an advisory body.

Meanwhile, further increases were reported in the operating expenses of hospitals in the United States. The cost per patient per day in nonfederal, general hospitals rose 6.9% between 1963 and 1964, ranging from $54.28 in the West to $34.31 in the South. For all hospitals, total expenses rose almost 10%, to about $12 billion. Most of the increased expense was in payroll costs. (See also HOSPITALS.)

Health insurance benefits reached a new high in the first nine months of 1965—an average of $14.1 million per day, or about 12.1% higher than in the comparable period of 1964. Major medical insurance was becoming an increasingly important part of the overall program.

The budget of about $8 billion for operating the U.S. Department of Health, Education, and Welfare in fiscal year 1966 included $2.09 billion for the U.S. Public Health Service and a record $1.18 billion for the research activities of the National Institutes of Health. The cost of the new Medicare programs in the first year of operation was estimated at $6 billion, part of which will come from sharply increased Social Security taxes.

Medical Services in Other Countries. Government-controlled health care plans in other countries continued to have difficulties in 1965. In Great Britain, many general practitioners were discontented with both the terms and conditions of their practice under the National Health Service (NHS). By the end of the year, prolonged negotiations had led to proposals for the most radical changes in the NHS since it was founded in 1948. New arrangements were proposed in the attempt to "relate income to work load, responsibility, and expenses incurred." Allowances for overtime work and arrangements for more regular hours also were proposed. Hospital conditions in Great Britain under the NHS were bitterly criticized.

Similar difficulties arose in France, where the cost of medical services under a social security system led to a large operating deficit, overwork of physicians, and general discontent among practitioners. The government agreed to hold negotiations for improved conditions.

In Italy, hospital physicians went on strike for a week in support of demands to provide more adequate retirement pensions.

In Mexico, the Association of Resident and Intern Physicians began a widespread protest, charging that "all Mexican doctors are underpaid because of government schemes that provide medical care through social security and other programs."

Physicians in Canada were reported to be deeply concerned over what their medical association regarded as "precipitate action" by the government in the direction of a federal medical care plan. It was stated that physicians had not been properly consulted prior to the announcement of the government's proposal.

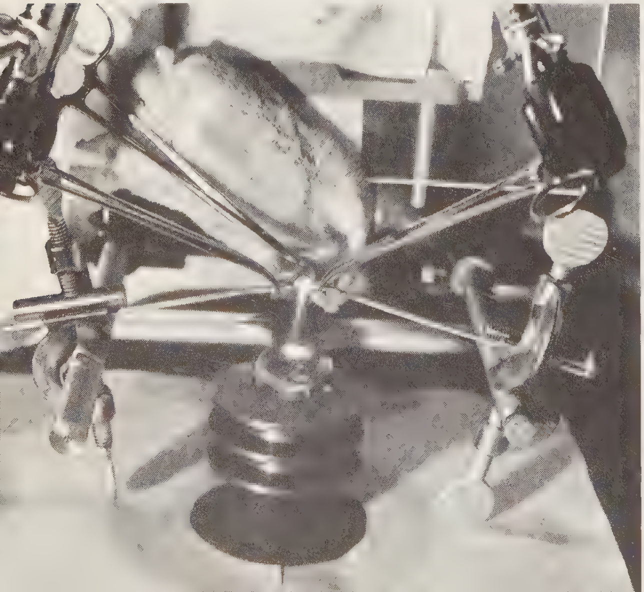
Education. The year 1965 marked the 200th anniversary of medical education in the United States, at the University of Pennsylvania School of Medicine.

The shortage of doctors, nurses, technicians, and other paramedical personnel is one of the greatest problems in the expanding demands for medical care. Fear that staffing new government institutions would aggravate this shortage in local communities was heightened by the need to draft doctors for service in the armed forces because of the increased demands for medical care in the war in Vietnam.

The annual report of the American Medical Association's Council on Medical Education indicated there would be more medical school graduates, but a major increase is several years in the future. In 1964–65, the nation's 88 medical schools had a total enrollment of 32,428—an increase of 427 over 1963–64. The number of graduates in 1965 was 7,409, as compared with 7,336 in 1964 and 6,994 in 1961.

SKIN TUMOR of dark tissue (melanoma), implanted in a cheek pouch of a hamster, is destroyed by a laser beam. Dr. Paul McGuff of Tufts Medical School directed the research.

DAN BERNSTEIN



Fourteen new medical schools, in the planning stage or under construction, are expected to be in operation by 1970. By that date, 850 to 1,000 additional students should be provided by the new schools. Many existing schools were planning to increase their enrollments to provide perhaps 600 more students by 1970. It was reported that more than 30 other institutions have expressed interest in establishing new schools, and there is a reasonably good possibility that at least 10 will be founded. The number of applicants to medical schools, which has been increasing since 1961, reached a new high of 19,168 in 1965.

In other countries, it was reported that India hopes to build 30 new medical colleges by 1970, and that the National University of Mexico will establish a new medical school.

Nobel Prize. The 1965 Nobel Prize in medicine or physiology was awarded to three French scientists—André Lwoff, François Jacob, and Jacques Monod, who were honored for their amazingly intricate and detailed research in the rapidly developing field of molecular biology and genetics. They investigated the complex mechanism of intracellular genetic control of cell growth, metabolism, and synthesis. Their work has implications in the study of cancer because malignant growth results from faulty regulation of these processes, perhaps as a result of virus material being incorporated in the genetic structure of the cell. (See also BIOCHEMISTRY; NOBEL PRIZES.)

Cancer. Much cancer research is being conducted in accordance with the theory that malignant growth results from faulty genetic regulation of cellular processes. Bacteria exposed to bacteriophage viruses have been studied as a possible model for the roles that viruses and human cells play in the production of tumors. In the bacteria, a part of the genetic material of the virus is integrated into the genetic apparatus of the cells and replicates with it. There is evidence that various suppressors may prevent activation of the modifying viral material. If they do, the viral material is transmitted from one generation to the next without changing the cells. However, inducer factors apparently may overcome the suppressor and permit multiplication of the virus. It is believed that similar relationships may prevail when the viral tumors are induced in animals, and possibly in man. These mechanisms involve the most intricate molecular chemistry of life processes.

The interaction of genetic material from two viruses may be necessary to induce tumors. This relationship has been demonstrated in animals. Mycoplasma bacteria (pleuropneumonia-like organisms) also have been found in animal tumors and human cancers, but it is suspected that these bacteria only make the cell walls more permeable to viruses.

Several adenoviruses can cause human respiratory infections and also can cause tumors in animals, sometimes in combination with animal viruses. A vaccine against Type 3 adenovirus and other adenoviruses that cause human respiratory infections was under development, but production of the vaccine was halted after it was found that Type 3 adenovirus might produce tumors.

The search for effective anticancer drugs continues. In time, a better understanding of complex cellular chemistry may lead to new compounds. More is being learned about the use of drugs in various combinations and sequences. Improvement in treatment has been achieved by perfusing high concentrations of antitumor drugs into localized areas of the body where malignancy is located. This technique has been particularly helpful in treating malignant melanoma, when the tumor is on a body extremity. Some success also was reported in treating several types of skin tumors by a new technique of locally applying ointments containing anticancer drugs, particularly 5-fluorouricil.

An interesting finding was the tumor-inhibiting activity of an extract of the bittersweet or woody nightshade plant (*Solanum dulcamara L.*). This plant was used in folk medicine for hundreds of years to treat warts and superficial tumors. Although it sems unlikely that the finding will influence significantly the treatment of cancer, it is true that several valuable drugs came into medical practice from folk medicine before the cause of the disease for which they were used was understood. These drugs include quinine for malaria, emetine for amebic dysentery, and digitalis for dropsy.

The link between cigarette smoking and cancer, particularly lung cancer, has been based primarily on statistical evidence that is considered incontrovertible by most authorities. New techniques have furnished further evidence that there is an unfortunate causal relationship between this common social habit and a very dangerous disease. One group of researchers reported there was a biochemical defect in the metabolism of an amino acid, tryptophan, in cigarette smokers. It was said that this defect leads to abnormal accumulation of orthoaminophenols, which are known to have carcinogenic properties in animals. Increased amounts of these substances have been detected in the urine of patients with bladder cancer, which also occurs more frequently in heavy smokers. The increased excretion of the abnormal compounds ceased when smokers stopped using cigarettes, but reappeared when they resumed smoking.

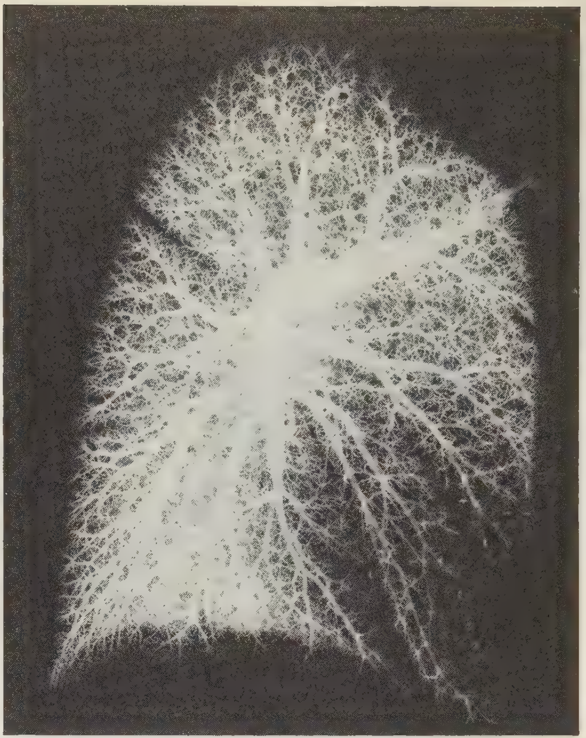
In other experiments, dogs were subjected to cigarette smoke. Microscopic study of the lining membrane of the bronchi showed malignant and premalignant changes in the dogs. Similar results were obtained by another group of researchers, who applied tobacco-smoke condensate to the bronchial mucosa of dogs. (See also CANCER; PUBLIC HEALTH.)

Drugs. New antibiotics were presented in 1965. A new semisynthetic penicillin, cloxacillin, which can be rapidly absorbed after oral administration, was reported to be effective against a variety of infections. Cephaloridine, still under study, while closely resembling cephalothin, was reported to be superior to it. Another experimental compound, X-5079C, was shown to be of value against fungal infections, for which antibiotics are urgently needed.

Most antibiotics have little or no effect on viruses; however, there was some progress in the development of antiviral drugs. A variety of substances, ranging from extracts of clams and several plants to synthetic chemicals, were found to have some antiviral effect. Perhaps the most promising were a thiopyrimidine derivate and some adamantanamine compounds, which have helped control influenza and other viral infections in animals and tissue cultures.

Two experimental drugs for the treatment of tuberculosis received favorable reports. It is expected that capreomycin, an antibiotic, and ethambutol, a synthetic chemical, may be substituted for older drugs when a change of medication is advisable.

Dimethyl sulfoxide (DMSO) recently was hailed as a wonder drug on the basis of preliminary and largely uncontrolled tests. In controlled studies with purified DMSO, the results were not as favorable as first believed, but helpful effects were reported in some types of bursitis and arthritis and in some cases of scleroderma. In November 1965, under federal drug administration (FDA) supervision, all firms voluntarily suspended trials of DMSO in humans after adverse effects on the eyes of laboratory animals had been observed. Later, continued use of DMSO was considered in circumstances where acceptance of some risk is justified by the severity of a disease, such as scleroderma.



JULIUS H. COMROE, JR. IN SCIENTIFIC AMERICAN

HUMAN LUNG has an arterial system with branches that subdivide into capillaries as small as 10 microns in diameter. Capillaries surround 300 million air sacs in lung.

Preliminary favorable results on scleroderma also were reported for an unrelated compound, epsilonaminocaproic acid. It is said to have anti-inflammatory and antiallergy effects, in addition to its previously recognized antifibrinolytic effect that presumably has been useful in treating patients with hemophilia. In early clinical trials, success in treating resistant cases of rheumatoid arthritis was attributed to another new anti-inflammatory compound, 1-phenyl-5-aminotetrazole.

The new drug cholestyramine has given dramatic relief from the intolerable itching often associated with severe jaundice. The drug removes bile compounds from the intestinal tract, and a decrease of the serum cholesterol level usually follows. Clinical value of the compound for the latter effect, however, has not yet been determined.

In December 1961, thalidomide was withdrawn from the market by its German manufacturer after the serious deformity of many babies whose mothers took the medication during pregnancy. The full measure of the properties of thalidomide still is not known, and new ramifications are reported each year. Thalidomide has shown beneficial effects when used against leprosy. When the drug was used with X-ray therapy, it reportedly gave some help for terminal cancer patients. It was reported that thalidomide

HOSPITAL for field use by U.S. Army *(left)* is inflated and set up 30 minutes after it is transported to site. Hospital hut, beds, cabinets, table, and other equipment are shipped in black box at extreme right. Drawing of hut (below) shows entry and arrangement of beds.

WIDE WORLD PHOTOS

prolongs the life of skin grafts in mice, presumably by suppressing immunity reactions. It is necessary to suppress such reactions when organs are grafted, but other drugs and X-rays that can provide suppression are highly toxic. The possible usefulness of thalidomide in suppressing immunity reactions will bear further investigation. (See also ALLERGIES; MENTAL HEALTH.)

Both the AMA and the FDA were active in analyzing reports of unfavorable effects of drugs, and several interim warnings and restrictions were issued. A new federal law provides for much more stringent regulation of stimulant and sedative drugs, such as amphetamines and barbiturates. Hallucinogenic drugs, such as lysergic acid diethylamide (LSD), also will be tightly controlled. Limiting the sale of morning glory seeds was advised after they were found to have effects similar to those of LSD.

It was reported that a chemical substance, magnesium pemoline, enhanced the speed of learning and the memory retention of laboratory rats. The compound appears to increase the synthesis of ribonucleic acid (RNA). Other animal experiments have indicated that RNA may be related to memory functions.

Many other new drugs were under development or were introduced in 1965. New pain-relieving compounds, new tranquilizers and sedatives, and a new diuretic appeared to hold particular promise. (See also DRUGS.)

Genetics. Perhaps the most important basic research in the medical sciences during 1965 was in the field of genetics.

It is believed that the genetic information (code) of cells is carried in deoxyribonucleic acids (DNA). Forms of ribonucleic acids (RNA) carry this information to the growth components of the cells. Specific chemical groups, called codons, which carry the code instructions for building the 20 amino acids into proteins, now have been identified in DNA. This genetic code has been found to be consistent for proteins as widely different as viruses and human hemoglobin. The most complex DNA yet discovered was obtained from the polyoma virus, which causes tumors in some animals. (See also BIOCHEMISTRY.)

Many human disorders, such as abnormal forms of hemoglobin, are due to genetic defects. A newly recognized condition of this type, hemocystinuria, produces a variety of structural body abnormalities. A mutant gene and a defective enzyme cause the metabolic disorder. Retinoblastoma, a malignant eye tumor found in young children, has been found to be inheritable. It was reported that an associated chromosomal abnormality has been identified. (See also GENETICS.)

Heart and Circulation. The phenomenal progress in medical technology in recent years has resulted in many devices for the diagnosis and treatment of heart disease. Improvements in these devices are being made constantly; this is especially true for artificial pacemakers, which supply a stimulus for the heartbeat when the natural electrical impulse for contraction is blocked. One of the difficulties with these implanted devices is that their batteries must be renewed periodically, and thus a surgical procedure is required. A new pacemaker undergoing trial has a nickel-cadmium battery that can be recharged from outside the body by using electromagnetic induction.

More hospitals have been installing cardiac wards where the heart function of seriously ill patients is monitored constantly by electronic devices and facilities for emergency treatment are immediately available.

It has been proposed that many congenital heart defects may be due to viral infections in the mother during pregnancy. Rubella (German measles) virus and coxackie viruses in particular are suspected of having this effect. Experiments with mice suggest that lesions of the heart valves may be caused by viral infection.

The relationship of serum cholesterol levels to arteriosclerosis and coronary heart disease remains a matter of debate. During the next few years, there will be extensive trials of several drugs that are used to lower cholesterol levels. These tests will be made by the National Institutes of Health. The American Heart Association strengthened its recommendation for restricting animal (saturated) fats in the diet and the "substitution wherever possible" of polyunsaturated fats. This change in diet usually leads to lower cholesterol levels. The adage, "An apple a day keeps the doctor away," received new support from reports that a plentiful dietary supply of pectin, with which apples are rich, may reduce the cholesterol level.

Anticoagulant drugs are frequently used to treat patients who have had coronary heart attacks. Unfortunately, the concurrent administration of other drugs may alter the effect of the anticlotting agent. Such possible complications of multidrug therapy are being recognized. (See also HEART DISEASE.)

Hormones. Synthesis of human insulin, an extremely complex compound, was completed in 1965. It is said to be the only complete human protein made in the laboratory thus far. Sheep and beef insulins had been synthesized, but the human form posed particularly difficult chemical problems. The synthetic product, with various alterations, will be useful chiefly for experimental purposes. The finding of insulin-like activity in extracts of the thymus gland excited considerable interest, but its significance has not been determined.

The administration of human gonadotropin hormones to infertile women resulted in multiple births in a number of cases. Stimulation of the ovaries caused them to release too many ova at or near the same time.

Resorcylic acid lactones, a new class of chemical compounds with hormone-like effects, were under investigation. It is anticipated that these compounds may have multiple medical uses.

A new understanding of a mysterious itching skin condition (neurodermatitis) resulted from the demonstration that it is associated with an abnormal concentration of norepinephrine in the affected skin area.

Infectious Diseases. The year 1965 marked the 10th anniversary of mass vaccination against polio. Injection of the early Salk vaccine largely has been supplanted by oral administration of the Sabin live-virus vaccine. In the past decade, polio has virtually disappeared in groups among which mass vaccination is practiced.

Man has not been as successful in dealing with malaria, one of his traditional enemies. Strains of falciparum malaria, which can resist the newer synthetic antimalarial drugs, have been encountered by the armed forces in Vietnam. The Army Medical Corps has alerted physicians that similar cases may appear in the civilian population after the infected servicemen return home. Heavy treatment with quinine, the oldest antimalaria remedy, has been most effective, but the drug has been in short supply as the result of unstable political conditions in areas that produce quinine.

Meningitis has been a problem in some military camps, and strains of meningococci that are resistant to usual sulfadiazine treatment have been found. Several of the newer antibiotics and massive doses of penicillin have been more effective.

An outbreak of diphtheria on the west coast during the winter of 1964–65 was attributed to inadequate immunization of the affected children. Five so-called needless deaths occurred, illustrating the necessity of maintaining protection against a serious disease after it has been brought under control.

The U.S. Public Health Service has been concerned about an increase in rabies in wild animals, particularly bats. Meanwhile, due to vaccination, rabies in dogs declined to an all-time low. In the United States in 1965, only one death was caused by rabies.

The incidence of viral hepatitis declined somewhat during 1965, but an increase is expected in 1966. Analysis of cases in Boston indicated that deaths occurred almost exclusively in the post-transfusion type of the disease (serum hepatitis). The virus is transmitted by blood from an infected but asymptomatic donor. Massive transfusion, or "blood exchange," has been used to treat hepatitis patients who are critically ill.

The rubella (German measles) epidemic in 1964–65 was the most severe since 1935. A number of babies were born with congenital defects after their mothers had contracted or had been exposed to the disease early in pregnancy. When these babies were carefully studied, it was found that many of them were infected with the virus. In turn, doctors and nurses who attended these babies apparently contracted the disease from them. A major effort has been made to prepare a rubella vaccine, especially for expectant mothers, but no rubella vaccine was available in 1965.

Sporadic outbreaks of a relatively mild type of influenza occurred in various sections of the United States during the winter of 1964–65, and the Public Health Service predicted more widespread influenza in 1965–66. The preventive vaccine has been modified to adjust for changing strains of the viruses.

Further progress was made toward developing vaccines against common virus-caused respiratory infections. An oral vaccine for adenovirus Type 4 was found to give good protection; however, there are many other types of adenoviruses. Attempts were made to divide the adenoviruses into serologic types. Many other viruses have relationships to common colds, hence no overall vaccine has been produced.

The small pleuropneumonia-like bacteria (mycoplasma) which cause "atypical pneumonia" also can cause sore throats and respiratory illness. An experimental vaccine appeared to give considerable protection. There is some suspicion that the mycoplasma organisms may be associated with arthritis. (See also RESPIRATORY DISEASES.)

A vaccine against coccidioidomycosis, a fungus disease, is being tested. The disease occurs chiefly in the dry areas of the Southwest.

An achievement of major interest was the practical cultivation of the leprosy bacillus for the first time. Although this organism was discovered in 1874, it has been extremely resistant to culture *in vitro*. The availability of the bacillus will assist efforts to develop antileprosy drugs.

Obesity. Obesity is one of the major health problems in the United States. Nutrition experts, who have been disturbed by the popularity of fad diets for weight reduction, have emphasized the importance of a well balanced, limited-calorie diet. The problem of obesity is being studied to determine any subtle variations in the metabolism of very obese individuals.

Emphysema. There has been an alarming increase in emphysema, a chronic and severe lung condition. Long-time smoking of cigarettes appears to be an important causative factor, but air pollution also is important. More active measures for smoke abatement and control of car exhaust fumes are being taken.

(See also DERMATOLOGY; PEDIATRICS; SURGERY; VENEREAL DISEASES.)

JAMES P. HENDRIX
Professor of Medicine
Duke University Medical Center

MENTAL HEALTH

Very significant legislation affecting mental health services in the United States was passed in 1965. While the scope of mental health research during the year was broad, results were not spectacular.

International Developments. The 24th International Psychoanalytic Congress was held in Amsterdam in 1965. At the meeting, Anna Freud summarized the main topic of discussion—obsessional neuroses. This summary, as well as Dr. Freud's book, *Normality and Pathology in Childhood* (1965), significantly update psychoanalytic psychology of personality development and childhood psychopathology.

An important study of the psychiatric and behavioral problems of adolescents in Sweden points up the fact that treatment even in a well-staffed residential center does not guarantee satisfactory results. One half of the boys did well during the first year after discharge, but over a period of five or six years the number dropped to less than one quarter. Of the group of boys studied, 23% were illegitimate, and 43% had lived over half of their lives before the age of 15 with but one parent. Only 18% had been consistently with both parents before that age. The high rate of disturbed or broken homes in the background of this type of population parallels findings in the United States.

U.S. Legislation. Vast changes and innovations will result from recent legislation in the fields of health, education, and welfare, although most of the new laws affect mental health and psychiatry only indirectly. Potentially, the most important development is not that more money or new funds were appropriated for any particular field or activity, but that the lines between professional activities and governmental programs are becoming more blurred. Psychiatry in particular, and medical care in general, is more interwoven with all levels of government activity and planning, including education, the effort to combat poverty and social injustice, and urban renewal.

A new government-citizenry partnership, exemplified by government-funded statewide or regional planning groups, is emerging. These groups, which consist mostly of volunteers, are charting future mental health services as stipulated by the Mental Health Act of 1963. There also has been other legislation authorizing and financing mental health activities, notably the provision of funds for staffing community mental health centers.

Public Law 89-97, the so-called Medicare Act, and Public Law 89-239, which provides regional centers for the treatment of cancer, stroke, and heart disease, primarily will affect the care of elderly patients, including more attention to their emotional and mental problems. As an indirect result of these two laws, there will be an increased shortage of professional manpower, since the demand for professional services will increase more rapidly than the number of professionals graduating from medical, nursing, and technical schools. To help meet this problem, new funds have been appropriated for these schools.

The two new health programs also probably will affect doctor-patient relationships, since there simply will not be enough physicians, as well as nurses, social workers, and other professionals to give the traditional type of care. (The number of medical school graduates has increased by only 50% in the past 40 years, while the population has almost doubled. Moreover, the population has increased disproportionally in the oldest and youngest age groups, which receive a disproportionate amount of medical care.) The new demands for institutional manpower must be met by increasing the number of activities performed by nonprofessionals trained on the job. This situation will reduce contact between the patient and the medical professional—a situation deplored by patients, nurses, and physicians. It is of particularly great concern to the psychiatrist, who is the medical specialist in interpersonal relationships, including doctor-patient relationships.

Research. A new discovery in the field of electroencephalography is that the brain produces "expectancy waves." These waves are negative oscillations of electrical activity in the brain after a conditional stimulus has become established. This relationship represents an element in learning, and it has potential value as an objective index of learning. A second finding concerns the refinement in distinguishing various sleep and dream stages by analyzing the electrical activity of the brain.

Two studies provided further confirmation that separation from a closely related person has a causative role in the development of illness. The studies were made at the University of Pennsylvania and Tavistock Clinic in England.

Previous studies on schizophrenia concordance in twins were further discredited by recent epidemiological findings in Sweden. Sixteen pairs of twins were studied over their life span, and no concordance for schizophrenia was found.

Suicide studies have shown that hospitalization for psychiatric reasons, whether for reasons of suicidal tendencies or not, establishes a high-risk cohort (group). The incidence of suicide by such previously hospitalized patients is four times higher for men and nine times higher for women than for the general population. The suicide rate among young people continues to increase.

Services. The extent and incidence of school phobia is an important problem. It has been established that school phobia is an indicator of risk cohorts. Although more than 90% of the children with this problem return to school and remain in school until graduation, when they are reexamined in adolescence, almost 30% are found to exhibit serious personality disorders. This finding indicates the need for preventive treatment beyond symptom relief at the time of truancy.

Family planning is being recognized increasingly as an element of public health practice and as an essential mental health principle. Birth control is a serious medical and psychiatric concern if one considers that an estimated 35,000 defective children were born to mothers affected by the rubella (measles) epidemic of 1964, and that these births could have been prevented by timely therapeutic intervention. About 10,000 of these children probably will prove to be mentally retarded.

The psychological and emotional implications of the sexual activities of young people are highlighted by two trends: the doubling of the venereal disease rate in the last five years, and the increase in the number of illegitimate pregnancies among teenagers. (See also MEDICARE; PUBLIC HEALTH.)

STEPHEN FLECK
Psychiatrist-in-Chief,
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MERCHANT MARINE. See SHIPPING.
MERCURY. See MINING.

METALLURGY

Metal shortages, high prices, and full-scale operations prevailed in the metallurgical industries in 1965. Mercury and silver were in particular short supply. The price of mercury more than doubled during the year, stimulating the search for new metallurgical processes and mineral deposits.

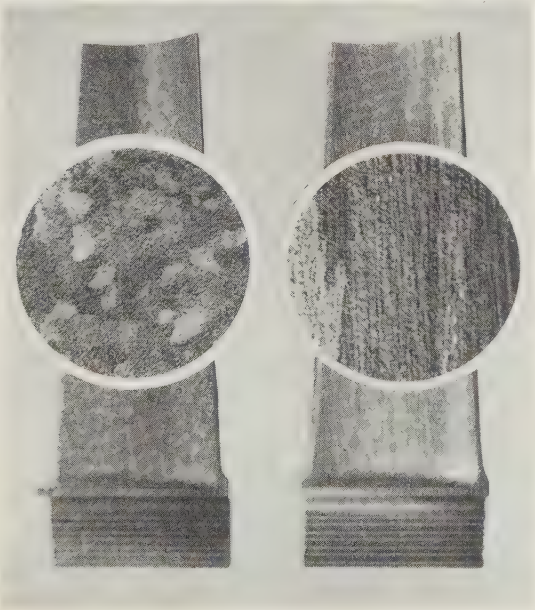
New Metals for Coins. Although the annual consumption of silver has exceeded the supply for several years, the U.S. Treasury Department has kept the price at the coinage value by selling silver from its stockpile. If selling were to continue at the present rate, the stockpile soon would be exhausted and the price of silver would soar, causing monetary chaos. To avoid this, U.S. mints in 1965 began producing dimes and quarters without silver and half dollars with reduced silver content.

The new coins are a metallurgical triumph. They are difficult to counterfeit. They have the proper size, weight, and electrical properties to actuate vending machines. The dime and quarter have copper cores (which show as a red line on the edge) sandwiched between two layers of a white cupronickel alloy (75% copper and 25% nickel). The silver content of the 50-cent piece was reduced from 90% to 40% by means of a facing alloy of 80% silver and 20% copper, bonded to a core containing 21% silver and 79% copper.

Advances in Metallurgical Technology. In 1965 two new commercial forming processes were introduced. Pratt and Whitney Aircraft announced a precision casting technique for fabricating jet engine turbine blades and vanes. It avoids grain boundaries perpendicular to the applied stress and improves high-temperature properties. The Stellite Division of Union Carbide introduced an operation for electrocladding and electroforming refractory metals. This process is adaptable to the deposition of tantalum, columbium, tungsten, molybdenum, vanadium, zirconium, chromium, and hafnium.

NEW METAL-CASTING TECHNIQUE for jet turbine blades (right) results in strong columnar grain rather than spotty grain (left) found in conventionally cast material.

PRATT & WHITNEY AIRCRAFT



Different kinds of composite materials were devised to obtain special properties. For example, nozzles which must withstand the hot blast from high-energy rocket propellants were made of a new composite material, porous tungsten infiltrated with silver. In operation the silver boils away, absorbing the heat and thereby cooling and protecting the tungsten.

Rolls Royce Ltd. increased the strength of aluminum tenfold by adding silica fibers. General Electric discovered that the adhesion between nickel and strong alumina fibers was influenced by small amounts of substances. The bond shear strength between ultra-high-purity nickel and alumina fibers, for instance, was more than doubled by the addition of 1 atomic percent of chromium.

Investigations proved that boron fiber with an elastic modulus of 60 million pounds per square inch and a specific gravity of 2.34 is a good reinforcing material. It is claimed that a boron fiber epoxy resin composite is stronger per unit weight than any other known structural material.

O. CUTLER SHEPARD
Professor of Metallurgy, Stanford University

METALS. See CHEMISTRY; METALLURGY; MINING; and articles on the major metals (ALUMINUM, COPPER, GOLD, etc.).

METEOROLOGY AND CLIMATOLOGY. See WEATHER.

METHODIST CHURCH

In 1965 The Methodist Church in the United States, with 10,304,184 members, moved closer toward the proposed union with the 750,000-member Evangelical United Brethren Church. A plan is to be presented to the General Conferences of both churches at simultaneous sessions in Chicago in November 1966, and union could come by 1968.

Both The Methodist Church and the Evangelical United Brethren Church are participating in a Consultation on Church Union with four other denominations—The United Presbyterian Church in the U.S.A., the Protestant Episcopal Church, the United Church of Christ, and Christian Churches (Disciples of Christ). The outline of a possible plan of union for these denominations is scheduled to be studied and discussed at the annual meeting of the Consultation in Dallas, Texas, May 2–5, 1966.

In 1965 The Methodist Church selected its first full-time executive in ecumenical relations. He is the Rev. Dr. Robert W. Huston, general secretary of the denomination's new Commission on Ecumenical Affairs. His office is in Evanston, Ill.

While The Methodist Church in the United States was making these and other ecumenical moves, British Methodists were initiating steps toward a possible union with the Church of England.

The Methodist Church moved forward in the area of race relations, but not as spectacularly as in 1964. Within a few months in that year a third of the denomination's Central (Negro) Jurisdiction had been absorbed in integrated units. Some leaders are hopeful that the segregated jurisdiction will be eliminated with another series of actions in 1966.

In April 1965, Bishop Prince A. Taylor, Jr., of Princeton, N.J., became president of the Methodist Council of Bishops. Bishop Taylor and another Negro Bishop, James S. Thomas, now preside over predominantly white episcopal areas, and eight Negro district superintendents administer integrated districts.

Offerings by members of The Methodist Church for its worldwide activities totaled a record $32,554,000 for the fiscal year that ended on May 31, 1965.

Plans were made in 1965 for the 11th World Methodist Conference, to be held in London, England, in August 1966. Delegates will represent an estimated 19.5 million church members and about 42.5 million Methodist adherents throughout the world.

William M. Hearn
Associate Secretary, Commission on Public Relations and Methodist Information
The Methodist Church

MEXICO

N. AMERICA
S. AMERICA

MEXICO · Information Highlights

Area: 759,529 square miles.
Population: 40,913,000 (June 30, 1965 est.).
Chief Cities (1965 est.): Mexico City, the capital, 3,192,804; Guadalajara, 1,048,351; Monterrey, 821,843; Ciudad Juárez, 385,082.
Government: *President*—Gustavo Díaz Ordaz. *Congress*—Senate, 60 members; Chamber of Deputies, 210 members; party seating (1965): Senate, Institutional Revolutionary Party (PRI), 60; Chamber of Deputies, PRI, 175, others, 35.
Religious Faiths: Roman Catholics, 94% of population; others, 6%.
Education: *Literacy rate* (1960)—65% of population aged 15 and over. *Total school enrollment* (1962)—7,196,244 (primary, 5,620,324; intermediate, 460,014; higher, 194,415; other, 921,491).
Finance (1965 est.): *Revenues*, $1,376,000,000; *expenditures*, $1,424,000,000; *monetary unit*, peso (12.50 pesos equal U.S.$1).
Gross National Product (1964): $17,968,000,000.
National Income (1964): $16,240,000,000; average annual income per person, $410.
Economic Indexes (1964): *Industrial production*, 159 (1958=100); *agricultural production*, 162 (1956–57=100); *cost of living*, 114 (1958=100).
Manufacturing (metric tons, 1964): Cement, 4,339,000; gasoline (1963), 3,968,000; sugar, 2,356,000; crude steel, 2,326,000; wheat flour (1962), 476,000; meat (1962), 452,000; lumber (1963), 1,043,000 cubic meters.
Crops (metric tons, 1964): Maize, 6,505,000 (ranks 5th among world producers); wheat, 2,100,000 (rank, 19th); citrus fruit, 1,316,000 (rank, 4th); cottonseed, 882,000 (rank, 6th); coffee, 159,000 (rank, 6th); cocoa beans, 24,000 (rank, 8th); potatoes, 381,000; rice, 265,000.
Minerals (metric tons, 1964): Silver, 41,943,247 troy ounces (ranks 1st among world producers); salt, 1,783,000 (rank, 13th); gypsum, 1,200,000 (rank, 8th); zinc, 244,931 (rank, 5th); manganese, 187,300 (rank, 12th); lead, 169,956 (rank, 5th); crude petroleum, 115,576,000 barrels (rank, 13th).
Foreign Trade (1964): *Exports*, $1,054,000,000 (chief exports: cotton, $170,160,000; coffee, $95,200,000; zinc, $42,560,000; lead, $23,280,000); *imports*, $1,493,000,000 (chief imports, 1963: nonelectrical machinery, $231,700,000; electrical machinery, $83,300,000; automobiles, $78,200,000). *Chief trading partners* (1963): U.S. (took 61% of exports, supplied 69% of imports); Japan (took 7% of exports, supplied 2% of imports); West Germany (took 2% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 111,600 miles (20,962 paved); *motor vehicles* (1964), 1,091,254 (automobiles, 665,127); *railways* (1963), 14,179 miles; *merchant vessels* (1964), 40 (247,000 gross registered tons); *national airlines*, 8; *principal airport*, Mexico City.
Communications: *Telephones* (1964): 659,785; *television stations* (1964), 13; *television sets* (1964), 1,300,000; *radios* (1963), 6,506,000; *newspapers* (1963), 204 (daily circulation, 4,405,000).

The year 1965 in Mexico was dominated by the continued rapid growth of the economy, and the promise this growth held for further correction of social ills. The government continued to manage the economy while assuring private enterprise that it had an important role to play in the country's development. Political opposition to the governing Institutional Revolutionary Party was at a low ebb.

Economic Growth. Although the extraordinary rise of 10% in the gross national product in 1964 was not repeated in 1965, growth in the first half of the year was a most satisfactory 6%. Economic expansion was notable in some lines of manufacturing, but a drought during the first half of 1965 hurt livestock and agricultural production. Foreign trade held up well with other forms of international income again compensating for much of the commodity trade deficit. Tourism, for example, was up 16% over the first quarter of 1964. Nevertheless, the trade deficit totaled about $272 million in the first seven months of 1965. Mexico continued to export grain in the first half of the year, but it was doubtful that this recent development would continue. No significant strikes or lockouts occurred.

Government and the Economy. The policy of economic nationalism found further expression in 1965. A Mexican group acquired a majority interest in the American Smelting and Refining Company, thus "mexicanizing" the most important foreign mining company in the country. In April the government briefly halted exports of sulfur by foreign-owned companies on the ground that reserves for domestic use were being depleted. By fall, however, at least a temporary compromise had been reached. Exports began again, and new foreign investment in sulfur was being considered.

The government closely controlled credit and prices in order to retard inflation. This policy, combined with a slowdown in public investment expenditures in the first half of 1965, led to some uneasiness among businessmen. The government explained that

UPI

GUSTAVO DÍAZ ORDAZ, president of Mexico, was inaugurated for a six-year term on Dec. 1, 1964. In his first major policy statement as president, on Sept. 1, 1965, Díaz Ordaz promised to continue development programs in housing, education, agriculture, industry, and social welfare. He said that this development would be done within a regulated economy, and that his government hoped to achieve an economic expansion of 6% a year. During the year the president frequently called agriculture Mexico's most acute problem.

Díaz Ordaz was born in Ciudad Serdán, in the state of Puebla, on March 12, 1911. He earned a law degree at the University of Puebla, and was admitted to the bar in 1937. He later taught at his alma mater, and held several state administrative and judicial posts. He served in the federal legislature between 1946 and 1952, and as secretary of the interior between 1958 and 1964. As the 1964 presidential candidate of the Institutional Revolutionary party, he received 90% of the votes.

MARC & EVELYNE BERNHEIM

HOUSING PROJECT in Mexico City, finished in 1965, has space for 60,000 persons. It surrounds the ruins of an Aztec temple (in front of the wall).

public investments had to be held down until it had paid off the overexpenditure of President Adolfo López Mateos' administration (1958–64). And on Sept. 1, 1965, President Gustavo Díaz Ordaz announced in his message to congress that public investment expenditures would be increased in the latter part of the year. The price-control program was a success, in that consumer prices rose only 1% in the first half of 1965. The government was not so successful in controlling other prices, however, and received complaints from manufacturers.

There was some criticism of the continued rise in the foreign debt, which amounted to 4.2 billion pesos on Sept. 1, 1965—up 1.4 billion from a year earlier. But the debt increase was partly offset by the rise in dollar and gold reserves, which in the year ending Aug. 31, 1965, rose $16 million, to a total of $553 million. Also helping the situation were record federal revenues, produced in part by a reform of the tax system that went into operation at the beginning of 1965. President Díaz Ordaz, in his message on September 1, pointed out that the foreign debt was rising less rapidly than the national wealth.

The government was formulating a six-year plan for the entire Díaz Ordaz administration. Parts of the plan had been completed by fall, including a general plan for agriculture in the period 1966–70. A National Agricultural and Livestock Bank was established on March 9, 1965, with a capitalization of 1.5 billion pesos. More ambiguous was the statement by Díaz Ordaz on September 1 that no country was self-sufficient, and that it might be profitable for Mexico to import grain under some circumstances. This jarred the pride Mexicans have taken in their new position as a grain exporter, and raised doubts about the agricultural policies of Díaz Ordaz.

In August the Ministry of Industry and Commerce announced a new investment program to develop some 370 industries with an investment of about $1.28 billion. (A list of 500 industries had been announced in 1962, but this was later pruned to 450.) The new program aimed at maximum use of natural and human resources, balanced industrial and agricultural development, exploitation and conservation of natural resources, decentralization of industry, import substitution, increased industrial integration, improved use of existing installations, and expansion of manufactured exports. Business investment in these industries was offered maximum government cooperation.

International Relations. Within the Organization of American States, Mexico maintained its opposition to intervention by one country in the internal affairs of another. In 1965, Mexico stated it was against a permanent inter-American armed force, as proposed by the United States after it had intervened in the Dominican Republic in April.

In the continuing controversy over Communist Cuba, the Mexican government by late summer was investigating reports of anti-Castro guerrilla training camps in Mexico, as well as the alleged operations of pro-Castro agitators.

There was a flurry of press criticism when the United States cut off, as of June 30, the distribution in Mexico of U.S. surplus stocks of food, which had been supplied for the past seven years. The United States apparently acted because Mexico had a grain surplus that permitted exports. Some Mexicans asserted, however, that the action was in retaliation for Mexico's hands-off policy with regard to the Dominican Republic.

A U.S.-Mexican dispute was resolved on March 22, when the United States agreed to construct a diversion canal to reduce the salinity of Colorado River water flowing through wheat and cotton areas in the Mexicali Valley.

ROBERT JONES SHAFER
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Syracuse University

MICHIGAN

Michigan experienced relative prosperity, peace, and progress in 1965. Automobile production continued high, there was little labor strife, and increased state income swelled the surplus in the general fund to $120 million. Governor George Romney and the Michigan Legislature produced a body of legislation that was generally regarded as sound and progressive.

Governor Romney's performance during the year increased his national political stature. There were no open clashes between him and the legislature, and he used his veto power and the threat of veto to good public advantage.

Economy. For the fourth successive year the automotive industry continued to register a near-record output and record earnings. By mid-May the unemployment rate had dropped to 2.6% in the state, and to 2.3% in Detroit. In July, General Motors and Ford had recalled all jobless employees and were hiring new workers. Because 1965 was not a contract year for automobile workers, there were few work stoppages.

The 73rd Legislature. The legislative session, which began in January, was forecast as a contest between Republican Governor Romney and the Democratic-controlled legislature—the first in 30 years. The record of the session was on the whole a productive one. Three primary tasks were undertaken: (1) more funds were provided for state agencies and services; (2) the state government was reorganized as required by the 1963 state Constitution (135 state agencies were consolidated into 19 principal departments); and (3) revision of the state's patchwork tax structure was considered.

According to the Constitution, the governor's budget proposals must be acted upon before any other fiscal legislation can be considered. Both houses rejected Governor Romney's proposed bills and proceeded to adopt their own programs. The final state budget was $820.4 million, or $140 million above that of the current year and $32 million over the governor's recommendation. Approximately two thirds of the increase was for education.

Of the 400 bills passed during the session, a

WIDE WORLD

MICHIGAN GOVERNOR ROMNEY (3rd from left), at governors' conference in July, meets with Governors Scranton of Pennsylvania (l.), Smylie of Idaho, and Love of Colorado.

TORNADOES IN WESTERN MICHIGAN in April overturned a trailer, crushing two automobiles, near Kalamazoo.

UPI

MICHIGAN · Information Highlights

Area: 58,216 square miles.
Population: 8,269,000 (1965 est.).
Chief Cities (1965 est.): Lansing, the capital (120,500); Detroit (1,600,000); Grand Rapids (203,000); Flint (202,000); Warren (149,000); Dearborn (111,000).
Government: *Chief Officers*—governor, George Romney (Republican); lt. gov., William G. Milliken (R); secy. of state, James M. Hare (Democrat); atty. gen., Frank J. Kelley (D); treas., Sanford A. Brown; supt. of pub. instr. (acting), Alexander J. Kloster; chief justice, Thomas M. Kavanagh. *Legislature*—Michigan State Legislature (convened Jan. 13, 1965); Senate, 38 members (23 Democrats, 15 Republicans); House of Representatives, 110 members (73D, 37R).
Education: *School enrollment* (1964–65)—public elementary, 1,147,154 pupils (38,448 teachers); public secondary, 809,838 pupils (31,510 teachers); nonpublic schools, 384,700 pupils (10,350 teachers); college and university (fall 1964), 233,525 students. *Public school expenditures* (1964–65)—$900,000,000 ($510 per pupil); average teacher's salary, $6,700.
Public Finance (fiscal year 1965); *Revenues, $1,691,527,803* (4% sales tax, $536,388,749; motor fuel tax, $176,703,731; federal funds, $272,488,644). *Expenditures,* $1,535,996,677 (education, $637,990,222; health, welfare, and safety, $387,577,788; highways, $296,672,258). *State debt,* $88,108,000 (fiscal year 1964).
Personal Income (1964): $22,311,000,000; average annual income per person, $2,755.
Public Assistance (fiscal year 1965): $166,247,205 to 273,175 recipients (aged, $55,915,288; dependent children, $69,905,194).
Labor Force (employed persons, July 15, 1965): *Agricultural,* 95,900; *nonagricultural* (wage and salary earners), 2,921,800 (37% manufacturing, 17% trade, 12% government). *Unemployed persons* (July 15, 1965)—129,000.
Manufacturing (1963): Value added by manufacture, $13,003,804,000 (transportation equipment, $5,068,299,000; primary metals, $1,143,823,000; nonelectrical machinery, $1,758,378,000; electrical machinery, $372,094,000; fabricated metals, $1,024,532,000; food and products, $737,042,000).
Agriculture (1964): *Cash farm income,* $382,485,000 (livestock, $410,343,000; crops, $380,605,000; govt. payments, $41,537,000). *Chief crops* (tons)—hay, 3,503,000 (ranks 12th among the states); alfalfa, 2,898,000 (rank, 7th); corn, grain, 2,851,000 (rank, 9th); sugar beets, 1,391,000 (rank, 5th); wheat, 1,178,000 (rank, 13th); oats, 510,000 (rank 8th); apples, 444,000 (rank, 3rd); grapes, 75,000 (rank, 3rd); peaches, 72,000 (rank, 2nd); rye, 29,000 (rank, 7th); cherries, 192,000; barley, 38,000.
Mining (1964): *Production value,* $555,495,000 (ranks 9th among the states). *Chief minerals* (tons)—iron ore, 15,536,000 (rank, 2nd); salt, 4,345,000 (rank, 5th); lime, 1,430,000 (rank, 3rd); gypsum, 1,421,000 (rank, 2nd); copper, 69,040 (rank, 5th); crude petroleum, 15,601,000 barrels (rank, 18th).
Fisheries (1964): *Commercial catch,* 19,761,078 pounds ($2,521,712). *Leading species*—lake herring, 4,713,433 pounds ($278,209); alewives, 3,331,184 pounds ($50,639); yellow perch, 3,255,955 pounds ($616,526); chubs, 3,020,293 pounds ($513,124).
Transportation: *Roads* (1963), 112,451 miles (92,624 paved); *motor vehicles* (1965), 4,243,799; *railroads* (1965), 11,524 track miles; *airlines* (1965), 15 (206 airports).
Communications: (1965): *Telephones,* 3,834,700; *television stations,* 20; *radio stations,* 167; *newspapers,* 54, (daily circulation, 2,382,451).

number dealt with important and long-standing state needs. Thirteen new circuit judges were provided, and a new state college was created. There was an overhaul of workmen's compensation and jobless pay, and a bill setting up a state-operated claims fund to pay for injuries and damages caused by uninsured drivers of motor vehicles.

The legislature recessed in June and reconvened in September to consider tax reform. The constitution prohibits a graduated income tax, but some representatives believed that substituting a flat-rate tax would discriminate against low-income families. Since a surplus of over $70 million was predicted for the General Fund, the legislature decided to take up the matter of new taxes later.

Reapportionment. In 1964 the electoral districts set up by the 1963 state Constitution were found to be unconstitutional, but the State Apportionment Commission could not agree on a new pattern. The State Supreme Court accepted a plan that came near the "one man, one vote" principle enunciated by the U.S. Supreme Court in 1964. However, in November 1965 this plan was found to violate the state Constitution and a new one was requested. The commission again could not agree and returned the question to the court.

Tornadoes. Early in April, tornadoes struck the western part of the state, causing 44 deaths and an estimated $50 million in property losses.

Sports. The people of Michigan cheered Michigan State University's football team to the Big Ten championship and a trip to the Rose Bowl, where it was defeated 14–12 by the University of California, Los Angeles.

CHARLES M. DAVIS
Chairman, Department of Geography
The University of Michigan

MIDDLE EAST. See ASIA.
MILITARY POLICY, U.S. See NATIONAL DEFENSE.

MILWAUKEE

Milwaukee, the largest city in Wisconsin (1965 est. pop.: city, 765,000; metropolitan area, 1,330,000), experienced in 1965 its first major civil rights issue—de facto school segregation. Other developments included the advancement of urban renewal projects and the transfer of the Milwaukee Braves baseball team to Atlanta, Ga.

Civil Rights. Civil rights groups charged that the city's system of neighborhood schools resulted in segregation. To call attention to their charge, these groups conducted sit-ins at school board meetings, held rallies and marches, and sponsored a four-day school boycott.

The Milwaukee school board denied the charge. The board did agree to allow a $50,000 study of the city school system that was proposed by an interracial group of civic leaders called the Committee of We-Milwaukeeans. The study was to give special attention to racial questions.

In a related development, Mayor Henry W. Maier proposed a year-long war on prejudice through an educational program to be financed by a $25,000 city appropriation.

Urban Renewal and Development. The city's Common Council approved a $101 million, six-year program calling for eight projects concerned with the clearance, conservation, and rehabilitation of blighted areas. In part of the area to be redeveloped, construction was begun on a shopping center and apartment buildings on a 62-acre east-side site. Another part of the area was bought by Milwaukee County for a Memorial Center for the Performing Arts. More than $6,000,000 in contributions was given to finance the music hall-theater section of the center.

UPI

AT A RALLY IN MILWAUKEE, children sing freedom songs to protest school racial imbalance. Rev. James Groppi (foreground) helped lead a Negro boycott of the schools.

The Common Council also approved an 80-acre Marquette University redevelopment project, and the city's first neighborhood conservation project.

New Railroad Station. On the southern edge of the downtown section, the Milwaukee Road opened a new railroad station, which it will share with the Chicago and Northwestern Railway Company. Adjacent to the station, a new $3,000,000 post office was being built.

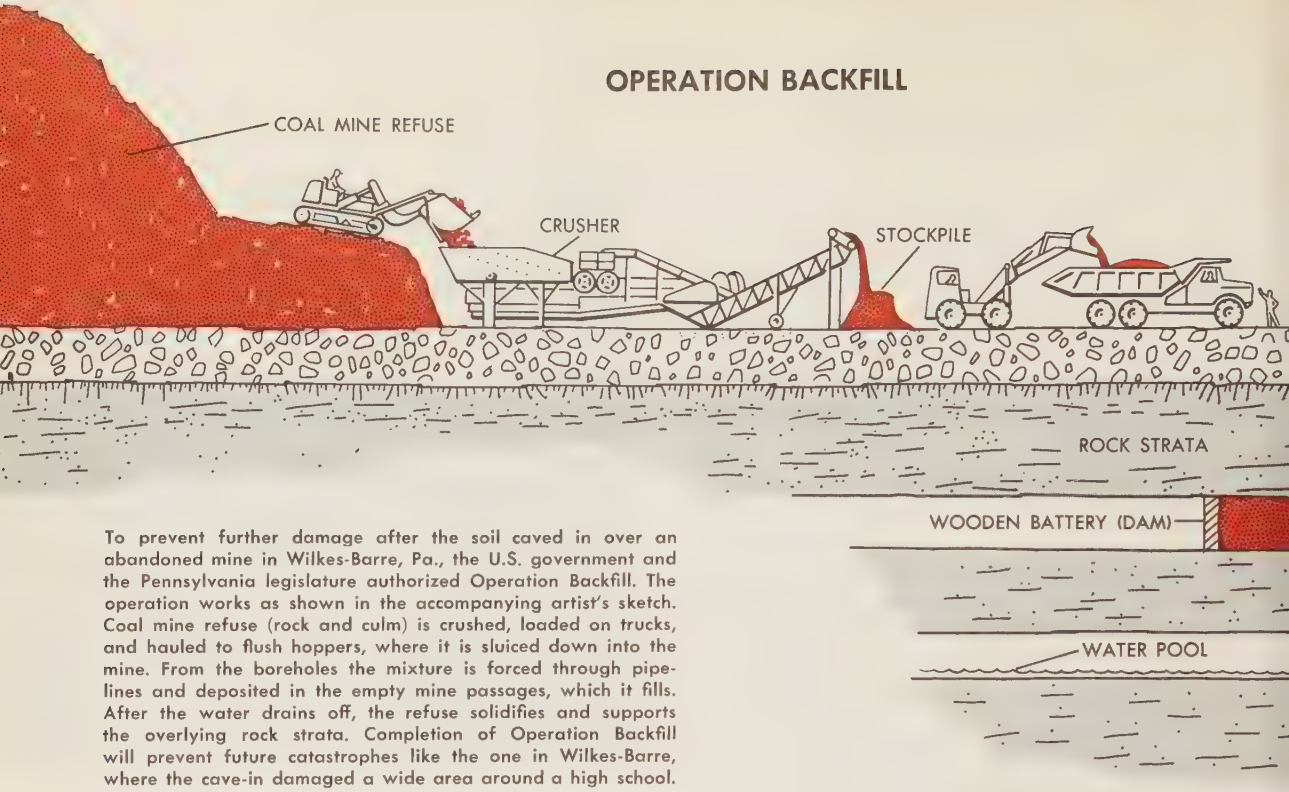
Civic Center. Construction began in 1965 in the civic center on a $13 million plaza and underground garage. In addition, a $1 million bond issue was proposed by the city for remodeling and air conditioning the center's auditorium and arena.

The Milwaukee Braves. The Milwaukee Braves, the city's major league baseball team, played their last season in County Stadium and moved to Atlanta, Ga. Milwaukee County filed a lawsuit in federal court to stop the club from moving. In addition, a group of civic leaders formed Teams, Inc., which will look for a new team to occupy County Stadium.

Economy. In the three-county Milwaukee area, retail sales totaled $1,605,610,000 in 1965. The 1965 consumer price index was 108.2 (1957–59=100). The value of manufactures for the area totaled $2,318,000,000. The civilian labor force was 492,900, of whom 474,000 were employed at the end of 1964.

Finances. The city budget for 1965 was $125,258,054; capital improvements totaled $12,636,376; and the city's bonded debt was $129,523,525. The tax rate was $71.62 per $1,000 assessed valuation.

LAWRENCE C. LOHMANN
City Hall Reporter, Milwaukee "Journal"



OPERATION BACKFILL

To prevent further damage after the soil caved in over an abandoned mine in Wilkes-Barre, Pa., the U.S. government and the Pennsylvania legislature authorized Operation Backfill. The operation works as shown in the accompanying artist's sketch. Coal mine refuse (rock and culm) is crushed, loaded on trucks, and hauled to flush hoppers, where it is sluiced down into the mine. From the boreholes the mixture is forced through pipelines and deposited in the empty mine passages, which it fills. After the water drains off, the refuse solidifies and supports the overlying rock strata. Completion of Operation Backfill will prevent future catastrophes like the one in Wilkes-Barre, where the cave-in damaged a wide area around a high school.

MINING

World production of most minerals rose to new levels in 1964, as the demand for raw materials continued to expand. This article deals with the research activities of the U.S. Bureau of Mines and with world production of minerals, under the headings: (1) Mining Research and (2) Mineral Production (including a table showing production of major minerals by countries in 1963 and 1964).

MINING RESEARCH

In 1965 the U.S. Bureau of Mines continued its researches in mining, metallurgy, and fuels technology.

Mining Projects. The bureau's efforts (conducted cooperatively with industry) to develop a technology for mining mineral deposits known to exist on ocean floors gained impetus when a third nationally known firm—Merritt-Chapman & Scott Corporation of New York City—joined the venture. Two concepts being developed in the program—a deep sea "corer" for sampling ocean-bottom deposits and a system for raising mineral sediments to the surface—were demonstrated by the Navy's Sealab II project at La Jolla, Calif. (see OCEANOGRAPHY).

The so-called moon-mining project, involving research into the basic physics of rock disintegration and the microstructure of rock-forming minerals, was furthered by a contract awarded by the National Aeronautics and Space Administration. This research explores the possibilities of extracting water, fuels, and building materials from lunar rocks, and is expected to enable moon explorers to utilize lunar resources in support of space missions.

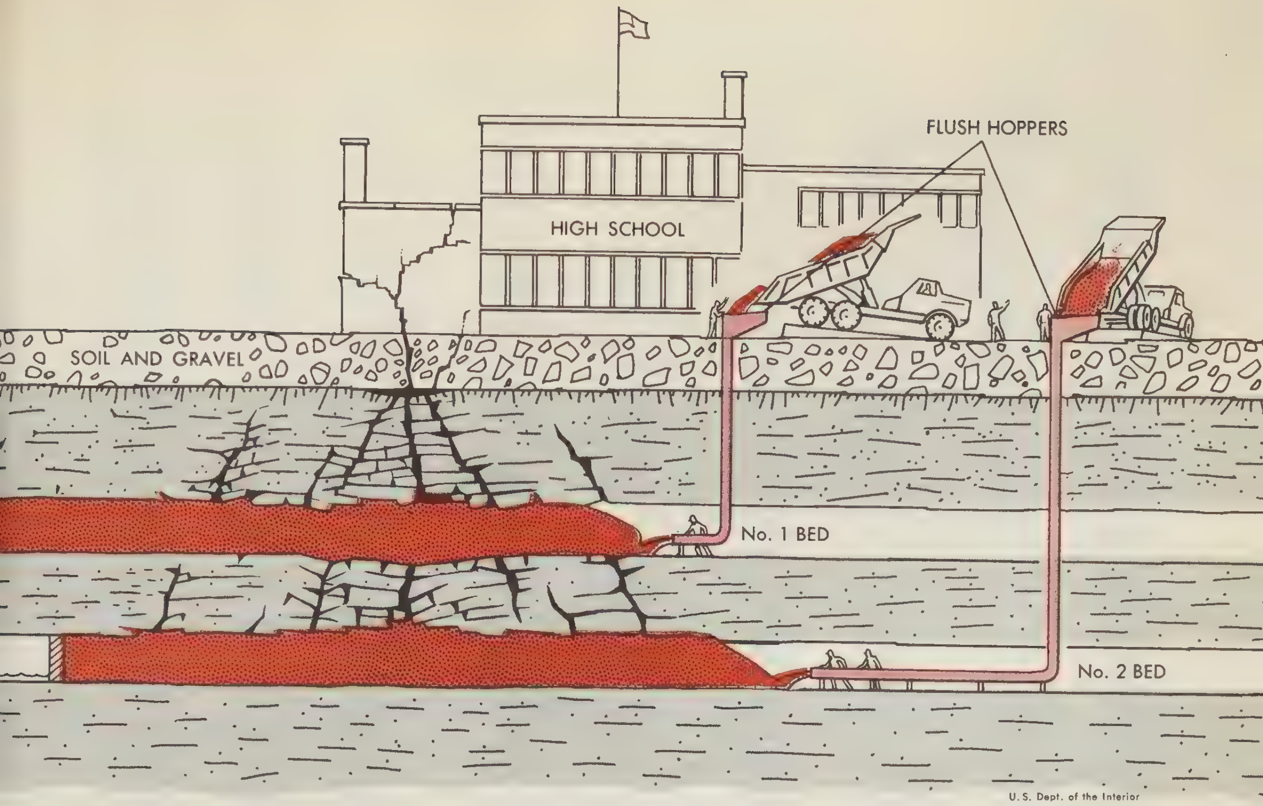
Other developments included progress in the use of rockbolts for supporting the roofs of mines and tunnels. A hydraulic penetrometer helps to select rockbolts of the right length and design, and a prestressing concept makes it easier to evaluate rockbolt pull-tests as indicators of secure bolt anchorage. In related experiments, bonding with a quick-setting liquid polyester resin, used with steel reinforcement rods, showed promise for preventing the sloughing of rock in mine passages.

Metals and Nonmetallic Minerals. During 1965 the Bureau of Mines concentrated on recovering metals from low-grade ores and on reclaiming metals from secondary sources, such as scrap and mill byproducts and wastes. Processes were developed that may overcome the high cost of sorting the various metals found in old automobiles and other discarded items. In a laboratory-scale demonstration, controlled high-temperature incineration was shown to be effective for removing copper from scrap steel articles, making them metallurgically suitable for use in producing new steel. By means of a vacuum distillation process developed by the bureau, nickel-cadmium battery-plate scrap yielded 99% of its cadmium content as a high-purity product. In addition, nearly pure tin was recovered from a smelter surplus byproduct by use of a pressure-filtration technique.

A bureau process for economically treating complex, low-grade copper ores was adopted for commercial use. Although the technical feasibility of the process had been demonstrated some time ago, further work was needed before it could be used industrially.

The bureau is conducting laboratory tests for a method of obtaining a high-purity molybdenum metal from molybdenite ore by means of a two-stage treatment; the method has definite industrial promise.

A low-cost bureau process for recovering mica flakes from a mica-bearing mineral abundant in the West was adopted commercially during 1965. It promises to result in substantial savings for Western mica consumers because it will reduce their dependence on costly sources of supply in the East. Meanwhile, the bureau stepped up research and de-



U.S. Dept. of the Interior

velopment work on a process that may double the West's commercial-grade reserves of the fertilizer mineral, phosphate rock. The new process permits economic extraction from ores formerly considered too low-grade for profitable mining.

The bureau evaluated the economic potential of numerous clay and shale deposits for use in making lightweight aggregate for concrete blocks, prestressed concrete products, and other building materials. Untapped deposits in Indiana and Illinois were found to have potential for commercial development.

Fuels Research. Research and development on ways to produce synthetic fuels and chemicals from plentiful supplies of coal continued. The tendency of some coals to "cake" on heating was successfully overcome in a coal-gasification pilot plant designed and operated by the bureau. Caking is essential in coals for coke ovens, but undesirable in coals to be gasified. Bureau scientists showed that high-quality carbon black, needed in making paints, inks, plastics, and tires, can be produced from coal.

Research continued on the secondary recovery of petroleum from reservoirs whose natural pressures are depleted. Bureau evaluations of water-flooding projects by which water is injected into oil-bearing formations to restore pressure and move the oil to producing wells, yielded additional information about obtaining better oil recoveries and accurately forecasting the performance of flooding operations. Bureau chemists also developed laboratory procedures for detecting traces of cesium and rubidium in oilfield brines. These ultimately may aid petroleum exploration by providing scientific clues to the geologic origin of petroleum and the waters or brines that occur with it. Through other studies, ways were found to prevent water from blocking gas production by clogging up pores in reservoir rock.

Conservation. Further important developments during 1965 include the bureau's launching of a comprehensive study of problems involved in the rehabilitation of surface-mined lands. The study was authorized by the Appalachian Redevelopment Act, signed by President Johnson in March 1965. The bureau also accelerated cooperative efforts to control fires in inactive coal deposits and to curb pollution of streams by acid mine water.

FRANK C. MEMMOTT
Acting Director, U.S. Bureau of Mines

MINERAL PRODUCTION

World mineral production achieved record levels again in 1964, accompanied by an even greater increase in consumption. Output figures were higher in 1964 than in 1963 for 50 of the 65 mineral categories listed by the U.S. Bureau of Mines 1965 *Minerals Yearbook.* Some 39 new records were established in the world group, and four in the free-world group. Recent production figures of the major producing countries are shown in the table on pages 452–454.

World Production. The United States led in the production of 27 of the mineral commodities for which there are reasonably complete world production totals. In output of other minerals, Australia ranked first in lead and rutile; Canada in asbestos, nickel, and zinc (mine); France in byproduct elemental sulfur; South Korea in graphite; Jamaica in bauxite; Japan in pyrites and talc; Malaysia in tin; Mexico in arsenic, fluorspar, and silver; South Africa in gem diamonds and gold; and Spain in mercury.

Communist countries ranked first in the output of 13 minerals. The Soviet Union was the leading producer of chromite, coal, high-temperature coke, corundum, iron ore, magnesite, manganese ore, peat, and platinum. Communist China led in the production of antimony and tungsten, and East Germany in low-temperature coke and fuel briquettes. However, unlike producers in the free world, Communist countries use most of

(*Continued on page 454*)

WORLD PRODUCTION OF MAJOR MINERALS[1]

	1963	1964
Aluminum	(Thousands of metric tons)	
Australia	41.9	80.3
Austria	76.5	77.7
Cameroon	52.9	50.6(?)
Canada	652.6	764.4
China	100.0(?)	100.0(?)
Czechoslovakia	60.0(?)	60.0(?)
France	298.4	315.4
Germany, East	45.0(?)	45.0(?)
Germany, West	208.8	219.9
Hungary	55.5	56.9
India	55.2	55.2
Italy	91.4	115.5
Japan	223.9	265.8
Norway	219.2	252.6
Poland	46.6	47.8
Spain	45.5	61.8
Switzerland	61.2	64.2
USSR	960.0(?)	1,000.0(?)
United Kingdom	31.1	32.2
United States	2,097.9	2,315.8
Yugoslavia	35.9	34.8
Total (est.)	5,515.0	6,105.0
Antimony	(Metric tons)	
Australia	75.	275.
Austria	497.	531.
Bolivia[2]	7,563.	9,640.
Canada	727.	779.
China	15,000.(?)	15,000.(?)
Czechoslovakia	2,000.(?)	2,000.(?)
Italy	241.	341.
Japan	192.	503.
Mexico	4,826.	4,788.
Morocco	675.	1,559.
Peru	740.	614.
South Africa	11,258.	12,882.
Thailand	613.	1,269.
Turkey	1,797.	1,737.
USSR	6,100.(?)	6,100.(?)
United States	585.	573.
Yugoslavia[3]	2,661.	2,729.
Total (est.)	55,900.	61,900.
Asbestos	(Thousands of metric tons)	
Canada	1,158.1	1,285.2
China	100.0(?)	120.0(?)
Italy	57.5	68.6
South Africa	186.7	195.6
Rhodesia	129.1	139.2
Swaziland	30.3	36.2
USSR	1,050.0(?)	1,150.0(?)
United States	60.2	91.7
Total (est.)	2,920.0	3,230.0
Barite	(Thousands of metric tons)	
Brazil	34.1	34.1[4]
Canada	157.4	156.4
China	90.0(?)	100.0(?)
France	74.5	74.5[4]
Germany, West[5]	423.1	442.6
Greece	85.0	68.0
India	37.3	46.2
Italy	106.6	84.7
Japan	37.5	38.1
Mexico	257.0	326.0
Morocco	94.6	89.8
Peru	124.8	132.4
Poland	45.7	45.7[4]
Spain	48.4	48.4[4]
USSR	200.0(?)	200.0(?)
United Kingdom	55.4	58.0
United States	728.6	740.9
Yugoslavia	104.5	114.9
Total (est.)	2,895.0	3,065.0
Bauxite	(Thousands of metric tons)	
Australia	359.9	903.4
British Guiana	2,379.9	2,507.8
China	400.0(?)	400.0(?)
Dominican Rep.	773.1	649.9[6]
France	2,028.9	2,425.0
Ghana[2]	210.8	268.7
Greece	1,281.1	1,300.0
Guinea, Rep. of	1,664.0	1,678.3
Haiti	332.5	378.6
Hungary	1,362.0	1,488.0
India	565.1	591.4
Indonesia	493.1	632.5(?)
Italy	269.6	236.1
Jamaica	7,013.9	7,936.6
Malaysia	608.9	639.2
Sierra Leone	20.0	150.7
Surinam	3,508.0	3,989.0
USSR	4,300.0(?)	4,300.0(?)
United States	1,549.2	1,626.4
Yugoslavia	1,285.0	1,293.0
Total (est.)	30,630.0	33,600.0
Beryl	(Metric tons)	
Argentina	748.[2]	389.[6]
Australia	112.	220.[6]
Brazil	1,968.[2]	1,720.[6]
Burundi and Rwanda	256.	298.
Congo (Léopoldville)	213.	203.[6]
Malagasy Rep.	411.	142.[2]
Mozambique	556.	383.
Rhodesia	226.	165.
South Africa	386.	137.
S. West Africa	55.	7.
Uganda	380.	408.[2]
USSR	1,000.(?)	1,000(?)
United States	681.	(7)
Total (est.)	6,700.	5,200.
Cadmium	(Metric tons)	
Australia	494.	474.(?)
Belgium	881.[2]	842.[2](?)
Canada	1,123.	1,270.
Congo (Léopoldville)	395.	406.(?)
France	262.	400.
Germany, West	223.	320.
Italy	279.	232.
Japan	1,012.	1,012.[4]
Mexico[3]	148.	30.(?)
Mexico[8]	943.	540.(?)
Peru	173.	205.(?)
Poland	420.(?)	420.(?)
S. West Africa[8]	480.	320.
USSR	1,700.(?)	1,800.(?)
United Kingdom	112.	191.
United States[9]	4,531.	4,744.
Total (est.)	12,065.	12,665.
Cement	(Millions of metric tons)	
Argentina	2.52	2.82
Australia	3.12	3.63
Austria	3.31	3.77
Belgium	4.71	5.85
Brazil	5.18	5.56
Canada	6.36	7.18
China	10.00	10.50(?)
Czechoslovakia	5.18	5.49
France	17.80	21.31
Germany, East	5.46	5.77
Germany, West	29.22	24.79
India	9.36	9.69
Italy	22.09	22.84
Japan	29.95	32.95
Mexico	3.68	4.34
Netherlands	2.08	2.87
Poland	7.67	8.76
Rumania	4.37	4.75
South Africa	2.88	3.46
Spain	7.75	8.22
Sweden	3.25	3.57
Switzerland	3.58	4.32
Turkey	2.70	2.96
USSR	61.02(?)	64.90(?)
United Kingdom	14.00	16.96
United States	62.83	65.73
Yugoslavia	2.83	3.04
Total (est.)	376.90	404.91
Chromite	(Thousands of metric tons)	
Albania	293.0	310.0(?)
Brazil	44.0	44.0[4]
Cuba	50.6(?)	50.6[4](?)
Greece[5]	16.6	16.6[4]
India	64.8	33.4
Iran	100.0(?)	116.0(?)
Japan	43.7	44.0
Philippines	459.1	468.1
South Africa	792.2	849.5
Rhodesia	374.1	447.6
Turkey	283.8	412.7
USSR	1,230.0(?)	1,300.0(?)
Yugoslavia	93.8	88.4
Total (est.)	3,950.0	4,280.0
Coal	(Millions of metric tons)	
Australia	44.01	47.14
Belgium	21.42	21.31
Bulgaria	20.93	24.33
China	270.00	290.00(?)
Czechoslovakia	101.60	103.81
France	50.23	55.27
Germany, East	256.88	259.30
Germany, West	250.61	255.02
Hungary	30.48	31.55
Coal (cont'd)		
India	66.92	64.01
Japan	52.47	51.07
Netherlands	11.51	11.48
Poland	128.49	137.63
South Africa[5]	42.45	44.92
USSR	531.72	554.00
United Kingdom	198.94	196.74
United States	432.90	457.38
Yugoslavia	27.42	29.56
Total (est.)	2,653.02	2,753.95
Cobalt	(Metric tons)	
Canada	1,372.	1,450.
Congo (Léopoldville)	7,376.	7,900.
Morocco	1,371.	1,678.
United States	(7)	(7)
Zambia	706.	1,408.
Total (est.)	11,700.	13,100.
Coke[10]	(Thousands of metric tons)	
Australia	2,896.	3,091.
Austria	1,634.	1,607.
Belgium	7,204.	7,398.
Canada	3,883.	3,940.
China	15,000.(?)	15,000.(?)
Czechoslovakia	9,299.	9,421.
France[11]	13,464.	13,941.
Germany, West	41,793.	43,265.
India	7,350.	7,320.
Italy	4,595.	4,675.
Japan	11,247.	12,933.
Netherlands[11]	4,270.	4,514.
Poland	13,199.	13,026.
South Africa	2,286.	2,391.
Spain	2,752.	2,559.
USSR[11]	63,873.	67,700.(?)
United Kingdom	15,792.	17,220.
United States	49,240.	56,376.
Total (est.)	279,278.	296,381.
Copper (mine)	(Thousands of metric tons)	
Australia	114.6	105.8
Canada[12]	410.6	448.8
Chile	604.1	630.4
China	90.0(?)	90.0(?)
Congo (Léopoldville)[3]	271.3	277.6
Cyprus[2]	26.3	16.8
Finland	33.9	32.3
Germany, East	24.0(?)	28.0(?)
Japan	107.2	106.0
Mexico	55.9	52.5
Peru	177.5	174.5
Philippines	64.0	60.5
Rhodesia	16.8	16.6
South Africa	55.2	59.5
S. West Africa	32.5	34.9
Spain	23.8	26.0
Turkey	25.7	31.7
USSR[3]	700.0(?)	700.0(?)
United States[12]	1,100.6	1,131.1
Yugoslavia	62.1	63.2
Zambia	588.1	632.4
Total (est.)	4,730.0	4,875.0
Diamonds	(Thousands of carats)	
Angola	1,084.	1,149.
Brazil	350.(?)	350.(?)
Cen. African Rep.	402.	442.
Congo (Léopoldville)	20,448.	20,017.
Ghana	2,678.	2,668.
Sierra Leone	1,388.	1,291.
South Africa	4,376.	4,450.
S. West Africa	1,195.	1,527.
Tanzania	589.	338.
Total (est.)	36,661.	36,285.
Fuel Briquettes	(Millions of metric tons)	
Australia	1.92	1.89
Belgium	2.30	1.50(?)
Czechoslovakia	0.78	0.80(?)
France	8.01	6.65
Germany, East	60.26	61.00(?)
Germany, West	22.19	20.77
Hungary	1.23	1.25(?)
Japan	4.30	4.08
Korea, South	3.45	3.50(?)
Netherlands	1.62	1.42
Poland	1.00	0.95(?)
Spain	1.19	1.04
USSR	8.50(?)	8.70(?)

WORLD PRODUCTION OF MAJOR MINERALS, Cont'd[1]

	1963	1964
Fuel Briquettes (cont'd)		
United Kingdom	1.68	1.35
United States	0.51	0.33
Total (est.)	121.50	117.90
Gold	(Millions of ounces)	
Australia	1.02	0.96
Canada	3.97	3.81
Colombia	0.32	0.36
Congo (Léopoldville)	0.21	0.13
Ghana	0.92	0.86
Japan	0.26	0.25
Mexico	0.24	0.21
Nicaragua	0.20	0.21
Philippines	0.38	0.43
South Africa	27.43	29.14
Rhodesia	0.57	0.58
USSR	5.10(?)	5.60(?)
United States	1.47	1.47
Total (est.)	44.20	46.10
Graphite	(Thousands of metric tons)	
Austria	99.6	102.2
Ceylon[2]	8.4	10.8
China	40.0(?)	40.0(?)
Germany, West	12.0(?)	12.0(?)
Italy	1.7	1.3
Japan	3.0	2.5
Korea, South	339.7	175.0(?)
Malagasy Rep	19.2	15.8[2]
Mexico	30.0	30.0(?)
Norway	7.6	7.6[4]
USSR	55.0(?)	55.0(?)
United States	(7)	(7)
Total (est.)	705.0	540.0
Gypsum	(Thousands of metric tons)	
Australia	698.4	780.0(?)
Austria	584.6	568.1
Canada	5,402.5	5,782.2
France	4,208.1	4,208.1[4]
Germany, East	257.2	257.2(?)
Germany, West[5]	1,059.5	1,155.0(?)
India	1,187.5	880.2
Iran	1,000.0(?)	1,200.0(?)
Italy	2,073.3	2,073.3[4]
Japan	782.7	753.2
Mexico	1,097.3	1,200.0(?)
Poland	585.1	585.1[4]
South Africa	187.5	240.1
Spain	3,862.4	3,862.4[4]
UAR (Egypt)	470.0(?)	470.0(?)
USSR	4,239.0	4,300.0(?)
United Kingdom	4,143.0	4,583.0
United States	9,421.4	9,692.4
Total (est.)	45,285.0	46,800.0
Iron (pig) incl. ferroalloys	(Millions of metric tons)	
Australia	3.73	4.10
Austria	2.11	2.21
Belgium	6.92	8.46
Brazil	2.52	2.25
Canada	5.50	6.08
China	17.00(?)	18.00(?)
Czechoslovakia	5.30	5.77
France	14.52	16.08
Germany, East	2.15	2.26
Germany, West	22.91	27.18
Hungary	1.40	1.49
India	6.74	6.74
Italy	3.87	3.63
Japan	20.43	24.51
Luxembourg	3.59	4.19
Netherlands	1.71	1.95
Poland	5.40	5.64
Rumania	1.71	1.92
South Africa	2.44	2.89
Spain	1.98	1.86
Sweden	2.01	2.21
USSR	58.69	62.40
United Kingdom	14.83	17.55
United States	67.00	79.76
Yugoslavia	1.06	1.08
Total (est.)	281.37	317.63
Lead (smelter)	(Thousands of metric tons)	
Argentina	24.0	23.0
Australia[13]	310.2	282.8
Belgium[9]	98.4	83.3
Bulgaria	51.3	87.5
Burma	17.7	18.1
Canada	141.4	137.4
China	90.0(?)	100.0(?)
France[9]	77.8	89.8
Lead (cont'd)		
Germany, East[9]	26.0(?)	26.0(?)
Germany, West	139.7	107.5
Italy	41.9	37.9
Japan	92.1	108.0
Korea, North	40.0(?)	40.0(?)
Mexico	186.2	166.7
Morocco	18.8	18.8
Peru	83.1	89.7
Poland	38.9	41.5
S. West Africa	1.8	47.8
Spain	62.1	55.1
Sweden	40.8	40.6
Tunisia	12.8	11.5
USSR[9]	350.0(?)	360.0(?)
United States	358.1	407.7
Yugoslavia	104.2	101.1
Zambia	19.6	13.2
Total (est.)	2,490.0	2,560.0
Magnesium	(Thousands of metric tons)	
Canada	8.08	8.18
China	1.00(?)	1.00(?)
France	1.80	0.99
Germany, West	0.50(?)	0.50(?)
Italy	5.53	5.50(?)
Japan	2.44	2.90(?)
Norway	20.60	23.00(?)
USSR	32.00(?)	32.00(?)
United Kingdom[9]	4.74	5.00(?)
United States	68.81	72.11
Total (est.)	145.50	151.20
Manganese Ore	(Thousands of metric tons)	
Brazil	1,254.4	1,080.6
British Guiana	142.7	118.8
Bulgaria	38.5	52.0
Chile	46.5	20.4
China	1,000.0(?)	1,000.0(?)
Congo (Léopoldville)	270.0	309.7
Cuba	75.7(?)	75.7(?)
Gabon	646.3	948.3
Ghana[2,14]	394.1	494.5
Hungary	152.4	130.0(?)
India (incl. Goa)	1,179.6	1,263.0
Ivory Coast	139.1	136.4
Japan	276.7	283.0
Mexico	171.7(?)	187.3(?)
Morocco	334.9	341.1
Rumania	260.0	250.0(?)
South Africa	1,307.7	1,320.2
USSR	6,663.0	6,700.0(?)
United States	9.6	23.6
Total (est.)	14,640.0	15.138.0
Mercury	(Thousands of flasks)	
Chile	0.61	0.17(?)
China	26.00	26.00(?)
Czechoslovakia	0.73(?)	0.73(?)
Italy	54.45	57.00
Japan	4.67	4.67[4]
Mexico	16.30	12.40(?)
Peru	3.09	3.28
Philippines	2.65	2.50(?)
Spain	56.95	74.96
Turkey	3.04	3.00(?)
USSR	35.00(?)	35.00(?)
United States	19.12	14.14
Yugoslavia	15.84	17.32
Total (est.)	239.00	251.00
Nickel (mine)	(Thousands of metric tons)	
Albania	3.0(?)	3.5(?)
Canada	199.5	211.5
Cuba	16.7(?)	17.0(?)
Finland	3.1	3.1(?)
New Caledonia[12]	37.4(?)	52.8(?)
Poland	1.3(?)	1.3(?)
South Africa	2.4(?)	2.4(?)
USSR	80.0(?)	80.0(?)
United States	10.4	11.1
Total (est.)	357.0	386.0
Petroleum	(Millions of barrels)	
Algeria (incl. Sahara)	184.3	202.3
Argentina	97.2	100.4
Canada	258.4	275.4
Colombia	60.3	62.6
Germany, West	53.3	55.4
Indonesia	165.0	170.7
Iran	538.1	618.7
Iraq	422.6	459.3
Kuwait	705.5	774.8
Kuwait-Neutral Zone	114.5	131.4
Libya	167.8	315.6
Petroleum (cont'd)		
Mexico	114.9	115.6
Qatar	70.1	77.7
Rumania	91.2	92.4
Saudi Arabia	594.6	628.1
Trinidad	48.7	49.7
USSR	1,504.3	1,646.4
United States	2,752.7	2,805.1
Venezuela	1,185.5	1,241.8
Total (est.)	9,537.4	10,327.6
Phosphates	(Thousands of metric tons)	
Algeria	348.1	72.9
Brazil	278.8	278.0(?)
China	700.0(?)	800.0(?)
Christmas Is.[2]	661.9	787.2
Makatea Is.	335.4	374.1[2]
Morocco	8,548.4	10,097.5
Nauru Island[2]	1,572.1	1,849.3
Ocean Island[2]	361.8	328.0
Senegal	595.9	798.0
Togo	1,068.1	778.2[2]
Tunisia	2,370.7	2,750.9
UAR (Egypt)	644.4	600.0(?)
USSR	11,000.0(?)	13,000.0(?)
United States	20,174.1	23,328.7
Total (est.)	51,400.0	58,850.0
Potash[15]	(Thousands of metric tons)	
France	1,916.0	1,806.0
Germany, East	1,845.0	1,935.0(?)
Germany, West	1,948.0	2,200.0(?)
Israel	113.0	300.0
Spain	260.3	292.6
USSR	1,530.0(?)	1,600.0(?)
United States	2,598.2	2,628.1
Total (est.)	11,000.0	11,800.0
Pyrite	(Thousands of metric tons)	
Australia	197.2	250.0(?)
Canada	432.2	323.3
China	1,200.0(?)	1,300.0(?)
Cyprus	919.2	672.5
Finland	537.6	547.2
Germany, West	404.2	429.4(?)
Greece	150.0(?)	140.0
Italy	1,398.8	1,396.6
Japan	3,894.3	4,000.0(?)
Norway	710.7	709.7
Portugal	602.1	607.4
South Africa	418.6	432.5
Spain	2,027.2	2,340.2
Sweden	402.6	402.6[4]
United States	838.0	861.1
Yugoslavia	356.0	428.0
Total (est.)	20,000.0	20,300.0
Salt	(Millions of metric tons)	
Brazil	1.19	0.75
Canada	3.38	3.53
China	10.50(?)	11.00(?)
France	3.69	3.70
Germany, East	2.00(?)	2.00(?)
Germany, West[5]	5.59	5.80
India	4.54	4.65
Italy	3.14	3.14
Japan	0.80	0.89
Netherlands	1.48	1.60
Poland	2.13	2.24
Rumania	1.64	1.81
Spain	1.70	1.70(?)
UAR (Egypt)	0.39	0.68
USSR	8.75(?)	8.80(?)
United Kingdom	6.50	6.75
United States	27.80	28.69
Total (est.)	94.92	98.69
Silver	(Millions of ounces)	
Argentina	1.94	1.94
Australia	19.58	18.28
Bolivia[2]	4.85	4.82
Burma	2.08	1.36
Canada	29.84	30.32
Chile	2.77	3.05
Germany, West	2.07	1.99
Honduras	4.28[2]	3.22
Italy	1.01	1.06
Japan	8.81	8.63
Mexico	42.76	41.94
Peru[12]	36.80	37.04
Philippines	0.77	0.85
South Africa	2.74	2.92
S. West Africa[12]	0.63	0.33
Spain	4.96	4.96[4]
Sweden	3.58	3.06
USSR	27.00(?)	27.00(?)
United States	35.00	37.00
Yugoslavia	3.79	4.04
Zambia	0.88	0.98
Total (est.)	250.80	249.50

WORLD PRODUCTION OF MAJOR MINERALS, Cont'd[1]

	1963	1964
Sulfur (elemental)	(Millions of metric tons)	
Canada	1.13	1.46
France	1.41	1.51
Mexico	1.55	1.73
Poland	0.24	0.29
USSR	1.35(?)	1.35(?)
United States	5.92	6.35
Total (est.)	12.80	13.98
Tin (mine)	(Thousands of long tons)	
Bolivia[2]	22.8	24.0
China[3]	28.0	25.0
Congo (Léopoldville)	6.9	7.7
Indonesia	12.9	16.3
Malaysia	59.9	60.0
Nigeria	8.7	8.7
Thailand	15.6	15.6
USSR[3]	20.0(?)	20.0(?)
Total (est.)	190.4	194.2
Titanium (ilmenite)	(Thousands of metric tons)	
Australia	206.7	311.6
Canada	344.1	494.2
Ceylon	19.1	46.2
Finland	93.9	116.1
India	26.0	10.8
Titanium (cont'd)		
Malaysia[2]	149.4	131.3
Norway	242.3	271.8
South Africa	28.2	—
Spain	50.6	40.2
United States	805.9	908.2
Total (est.)	1,983.5	2,337.3
Tungsten[16]	(Thousands of metric tons)	
Australia	1.63	1.69
Bolivia[2]	2.28	2.07
Burma	0.75	0.48
China	22.60(?)	20.40(?)
France	0.70	—
Japan	0.78	0.86
Korea, South	5.53	5.99
Peru	0.52	0.67
Portugal	1.62	1.77
USSR	11.00(?)	11.00(?)
United States	5.13	8.39
Total (est.)	58.70	58.80
Uranium Oxide (U_3O_8)	(Metric tons)	
Australia	1,100.(?)	335.(?)
Canada	7,576.	6,272.
France[17]	2,399.	1,735.
Uranium Oxide (cont'd)		
South Africa	4,111.	4,032.
United States	12,898.	10,747.
Total (est.)[18]	28,160.	23,210.
Zinc (smelter)	(Thousands of metric tons)	
Australia	182.7	188.5
Belgium[9]	206.3	222.5
Bulgaria	56.1	58.6
Canada	257.7	306.4
China	90.0(?)	90.0(?)
Congo (Léopoldville)	52.7	55.6
France	172.1	194.0
Germany, West	105.2	107.0
Italy	73.6	72.6
Japan	264.3	285.8
Mexico	56.8	59.4
Peru	54.7	59.7
Poland	181.2	186.9
Spain	64.7	63.0
USSR	465.0	460.0
United Kingdom	100.6	111.0
United States	809.7	865.5
Total (est.)	3,475.0	3,675.0

[1] Output of minor countries not listed are included in totals. In general, listing includes countries that have produced more than 10% of the total. [2] Exports. [3] Smelter output. [4] 1963 data. [5] Marketable. [6] U.S. imports. [7] Withheld to avoid disclosing individual company confidential data. [8] Cadmium content of flue dust exported for treatment elsewhere; to avoid duplication, data are not included in the total. [9] Includes secondary. [10] Oven and beehive coke, including breeze. [11] Includes breeze. [12] Recoverable. [13] Includes Pb content of lead bullion (for export). [14] Dry weight. [15] Marketable in equivalent K_2O. [16] Concentrates 60% WO_3 basis. [17] Includes Gabon and Malagasy. [18] Excludes estimate for USSR. A question (?) means an estimate. Source: U.S. Bureau of Mines.

their output domestically in spite of the increase in their production.

The free world provided about 71% of the steel output in 1964; 87% of the gold; 82% of the bauxite, copper, molybdenum, crude petroleum, silver, and sulfur; 73% of the lead, nickel, tin, and zinc; 69% of the potash, pyrites, and pig iron; and 63% of the antimony, high-temperature coke, graphite, and iron ore.

Though smaller industrial centers have developed in Australia, India, South Africa, Brazil, Mexico, and a few other countries, the United States, western Europe, and Japan continue to be the chief forces in expanding the free world economy, and their requirements are the principal determinants of demand for minerals. Together the United States, Canada, Japan, and western Europe import two thirds of the free world's exports of metallic and nonmetallic minerals and mineral fuels.

DEEP-SEA CORER of the Bureau of Mines raises some sediment from the ocean bottom off the California coast. Samples thus obtained are analyzed in the bureau's laboratories for their mineral content and other characteristics.

U.S. BUREAU OF MINES

United States. A record $20.4 billion worth of metals, nonmetals, and fuels was produced in the United States in 1964—$800 million above 1963. The unprecedented demand for minerals has greatly stimulated the development of new mines and the expansion of processing capacity. Nearly all the leading 80 mineral commodities showed an upward trend. Of the three major groups, metals rose 10% above the 1963 level, nonmetals 5%, and fuels 3%.

The United States contributed almost 26% of the world's steel production in 1964.

A strong demand for copper brought the output up 3% from 1963, to a record 1.25 million tons, and the demand for lead and zinc was so great that government inventories had to be tapped. The price of these three metals also advanced.

Gold production dropped slightly in 1964, to 1.47 million troy ounces, valued at $51.4 million. Reflecting an improved balance-of-payments position and a lower rate of dollar-to-gold conversions, the outflow of gold from the U.S. Treasury stock was less than in 1963.

Silver output increased 4% above 1963, to 37 million ounces, valued at $47.9 million. The Treasury stock of silver bullion declined for the sixth consecutive year as withdrawals for domestic industrial use and for coinage increased. Late in 1965 the U.S. Mint began minting half-dollars that had a silver content of 40%, as against 90% for half-dollars previously minted. (See also METALLURGY.)

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MINISTRY, Canadian. See CANADA.

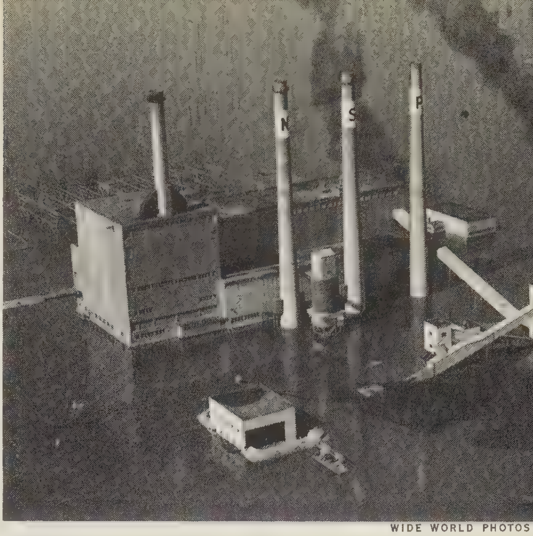
MINNESOTA

Minnesota communities along the Mississippi River and its tributaries suffered their worst flooding in history during April 1965. President Lyndon Johnson declared 59 Minnesota counties disaster areas, and personally inspected flood damage in the Twin Cities on April 14. The floods caused about $97.5 million in property damage, and created widespread demands for more flood-control programs.

Another natural disaster, a series of tornadoes, swept through ten Minnesota counties on May 6, causing $34.5 million in property damage. The suburbs of Minneapolis were hardest hit.

The Legislative Session. Gov. Karl F. Rolvaag, of the Democrat-Farmer-Labor Party, was at odds with the conservative-controlled, Republican-oriented Legislature during most of its 120-day session. He vetoed 12 bills. His most controversial veto, that of the bill reapportioning legislative districts, was challenged as unconstitutional, but the Minnesota Supreme Court upheld the governor's power to veto reapportionment legislation. Political friction between the governor and the Legislature then brought the reapportionment issue to a standstill.

The Legislature petitioned Congress to amend the federal Constitution to allow apportionment to be based on factors other than population in one of the state's legislative houses. The Legislature also doubled legislators' pay and legalized distribution of birth-control information and devices.


WIDE WORLD PHOTOS

MINNESOTA FLOODS threatened this generating plant near Minneapolis on April 13. The banks of the Minnesota River under normal conditions are outlined by the rows of trees.

MINNESOTA · Information Highlights

Area: 84,068 square miles.
Population: 3,613,000 (1965 est.).
Chief Cities (1965 est.): St. Paul, the capital (308,000); Minneapolis (465,000); Duluth (104,000); Bloomington (65,000); St. Louis Park (50,000); Richfield (49,000); Rochester (47,000); St. Cloud (37,500).
Government: *Chief Officers*—governor, Karl F. Rolvaag (Democrat-Farmer-Labor); lt. gov., A.M. (Sandy) Keith (DFL); secy. of state, Joseph L. Donovan (DFL); atty. gen., Robert W. Mattson (DFL); treas., Val Bjornson; commissioner of education, Duane J. Mattheis; chief justice, Oscar R. Knutson. *Legislature*—(convened Jan. 5, 1965; elected without party designation); Senate, 67 members; House of Representatives, 135 members.
Education: *School enrollment* (1964–65)—public elementary, 463,000 pupils (17,000 teachers); public secondary, 342,000 pupils (15,625 teachers); nonpublic schools, 192,000 pupils (5,800 teachers); college and university (fall 1964), 106,097 students. *Public school expenditures* (1964–65)—$395,000,000 ($528 per pupil); average teacher's salary, $6,460.
Public Finance (fiscal year 1965): *Revenues,* $1,554,165,862 (selected and gross receipts, $253,241,822; property tax, $31,094,404; federal funds, $195,826,844). *Expenditures,* $1,556,008,068 (education, $401,345,718; health, welfare, and safety, $298,149,927; highways, $397,545,979). Bonds and certificates outstanding, $219,964,500 (June 30, 1965).
Personal Income (1964): $8,364,000,000; average annual income per person, $2,375.
Public Assistance (fiscal year 1965): $108,317,168 to 127,315 recipients (aged, $35,297,919; dependent children, $30,928,085).
Labor Force (employed persons, Aug. 15, 1965): *Agricultural,* 283,000; *nonagricultural* (wage and salary earners), 1,259,200 (21% manufacturing, 21% trade, 15% government). Unemployed persons (Aug. 15, 1965)—43,300.
Manufacturing (1963): Value added by manufacture, $2,827,660,000 (transportation equipment, $131,497,000; primary metals, $64,455,000; nonelectrical machinery, $486,977,000; electrical machinery, $224,139,000; fabricated metals, $146.109,000; food and products, $585,189,000.
Agriculture (1964): *Cash farm income,* $1,613,854,000 (livestock, $1,031,814,000; crops, $460,908,000; govt. payments, $121,132,000). *Chief crops* (tons)—corn for grain, 7,619,000 (ranks 4th among the states); hay, 6,771,000 (rank, 4th); alfalfa, 5,362,000 (rank, 4th); oats, 2,303,000 (rank, 1st); sugar beets, 1,328,000 (rank, 7th); wheat, 638,400 (rank, 17th); potatoes, 495,000 (rank, 8th).
Mining (1964): *Production value,* $497,495,000 (rank, 13th). *Chief minerals* (tons)—iron ore, 55,581,000 (ranks 1st among the states); manganiferous ore, 188,481 (rank, 1st); sand and gravel, 35,817,000; stone, 3,588,000.
Fisheries (1963): *Commercial catch,* 14,759,000 pounds ($886,000.)
Transportation: *Roads* (1964), 124,910 miles (33,697 paved); *motor vehicles* (1964), 2,041,172; *railroads* (1965), 12,224 miles; *airlines* (1965), 7 (461 airports).
Communications (1964): *Telephones* (1965), 1,650,700; *television stations,* 11; *radio stations,* 88; *newspapers,* 25 (daily circulation, 1,237,014).

Economy. Employment indicators pointed to continued modest economic growth in the state. In September, nonfarm employment reached an all-time high of 1,098,000, while the unemployment rate of 2.3% was the lowest since 1956. Farm income lagged behind 1964 levels because of low prices, feed shortages, and adverse weather.

The most encouraging signs for Minnesota's future economic health were the gains in manufacturing and mining. A steady decline in mining employment on the once-affluent Iron Range was reversed in 1965, partly because of a spurt in the taconite industry. Planned investment in new taconite plants will total almost $300 million, but it was too early to predict whether taconite development would revitalize the depressed economy of the Iron Range.

Fiscal Affairs. The Legislature approved record appropriations of $791.3 million for the 1965–66 biennium. They included $503.2 million for education and $170.3 million for welfare and correctional institutions. Income taxes were raised, but a much-needed general tax reform was not attempted.

On March 29 the State Capitol Credit Union, the largest credit union in the state, was taken over by the Minnesota banking commissioner, who charged mismanagement. The union was reopened under new management on October 1.

State insurance commissioner Cyrus Magnusson, and 16 insurance executives were indicted on October 29, on charges of mail fraud and conspiracy in connection with the financial collapse of the American Allied Insurance Co. Magnusson refused to resign, but he took a leave of absence from his office pending trial.

Other Events. Mayor Arthur Naftalin of Minneapolis was elected to his third term on June 8. Vice President Hubert H. Humphrey returned to his native state on July 27 to deliver the principal address at the National Governors' Conference, meeting in Minneapolis. In St. Paul, plans for the construction of a $25 million complex of business and office buildings were announced by the St. Paul Housing and Redevelopment Authority.

JEANNE SINNEN
Senior Editor, University of Minnesota Press

MINT, U.S. See BUDGET, U.S.; MONEY.

MISSILES

POLARIS A-3 MISSILE, with a range of 2,500 miles, is launched from a submerged submarine. By 1968, the U.S. Navy will have 28 nuclear-powered subs armed with this missile.

U.S. NAVY

MISSILES

The emphasis in U.S. missile development during 1965 was clearly on tactical types useful for fighting limited wars. Although missiles for aerospace defense and strategic purposes underwent continued development, they were of no use in Vietnam despite the forays made by another strategic weapon system, the B-52 heavy bombers. The deficiency of American arms in fighting a war against guerrillas was recognized by the Department of Defense and underlined by both Congress and the nation's press. As a result, work on advanced types of tactical missiles was accelerated in 1965, although it was doubtful that any would be perfected for field use before 1967.

U.S. defense planners were unimpressed when, in November 1965, the Soviet Union announced it had a missile capable of orbiting the earth and dropping at command on any target. The general reaction was that such a weapon would be less effective than intercontinental ballistic missiles launched from the ground.

TACTICAL MISSILES

U.S. tactical missiles showed up well in development and flight tests during 1965, but the Bullpup was the only U.S. air-to-surface missile used in Southeast Asia.

War in Vietnam. The 750-pound warhead version of Bullpup, although effective against undefended targets, could not easily be brought to bear on those protected by antiaircraft weapons. The missile's visual-radio command guidance system required the delivering aircraft to make a deep dive toward its target and to stay on this path too long to be safe from concentrated enemy fire. Hawk surface-to-air missiles were emplaced in South Vietnam early in 1965 in expectation of raids by Soviet-built North Vietnamese aircraft.

The problem of using Bullpup was symptomatic of the dilemma faced by U.S. tactical air forces in 1965. If the delivering planes flew high, they were open to discovery and attack by surface-to-air missile systems that the Soviet Union had given the North Vietnamese; if the planes flew low to avoid detection by ground radar systems, antiaircraft fire was the danger.

These problems gave impetus to the Defense Department's search for missiles that could operate against guerrillas who were equipped with modern weapons. In particular, the department pressed development of air-to-surface missiles that aircraft could launch while still a safe distance away from target areas. Programs receiving serious attention included the Navy's Walleye missile system and the Air Force's SRAM (short-range attack missile).

Walleye, a 1,000-pound glide bomb with a range of several miles, is guided by a television system to target. Only initially does the pilot have to monitor the trajectory; then the missile's guidance system takes over and "homes" the weapon onto its target.

U.S. NAVY

U.S. NAVY CRUSADER JET FIGHTER, operating from an aircraft carrier of the Seventh Fleet, fires Zuni rocket at Vietcong target in South Vietnam.

Thus the aircraft does not have to stay on the target run as long as when delivering the Bullpup missile. A weakness of Walleye is that it must be delivered from an altitude in range of surface-to-air missiles.

The need for a longer stand-off range that would lessen this problem led to the concept of Condor, a highly classified air-to-surface missile for the Grumman A-6A Intruder and the General Dynamics F-111B. The Condor missile is expected to have a 40-mile range if it becomes operational.

SRAM was conceived for the Strategic Air Command, particularly for the Boeing B-52 Stratofortress, the General Dynamics B-58 Hustler, and the F-111A (Air Force version of the aircraft once known as TFX; the Navy version is F-111B). The Defense Department is also expected to use SRAM on tactical missions, just as it has used the B-52.

Soviet surface-to-air missile systems were under construction in North Vietnam in mid-April 1965. On July 24 a Soviet missile downed a McDonnell F-4C Phantom jet fighter—the first of several U.S. aircraft to be hit by Soviet SAM-2 missiles in Vietnam. Subsequently, U.S. planes destroyed several of the missile sites.

SAM-2, also known as Guideline, is similar in appearance and performance to the U.S. Army's old Nike Ajax, which was replaced by the Nike Hercules. The Soviet missile was first seen publicly in a Moscow military parade in 1957, and is the same missile that the USSR has exported to Cuba, India, Indonesia, Iraq, the United Arab Republic, and other countries. It is presumably the same weapon used to down several U.S. U-2 spy planes. SAM-2 weighs 4,000 to 5,000 pounds, carries more than 400 pounds of TNT in its warhead, and has a slant range of about 30 miles corresponding to a ceiling of 40,000 feet. A vertical launch would give the missile an 80,000-foot ceiling. Propelled by two stages—a solid booster and a liquid sustainer—the missile is 35 feet long and 2 feet in diameter; it reaches a speed of about 2,000 mph. Its guidance is probably similar to the radar command system used in Nike Ajax. In this system, the missile rides along a radar beam sent up from the ground to target.

Lance. The U.S. Army's Lance surface-to-surface missile, designed for division support, successfully passed its first flight test in mid-March 1965. Highly mobile and lightweight, this missile may eventually replace Honest John and Lacrosse and perhaps Little John. Lance has a range up to 30 miles and is the first Army missile to use prepackaged, storable liquid propellant. This means there is no need to fuel the missile on the battlefield or to worry about the temperature of the propellant. During 1965 the weapon was successfully fired from operational launchers. Lance can carry either a nuclear or high-explosive warhead.

Chaparral. This fair-weather ground-to-air version of the air-to-air Sidewinder missile passed its first guided firing tests in October 1965 at the Naval Ordnance Test Station, China Lake, Calif. Considered a low-cost, interim Army defense against helicopters and other low-flying aircraft, Chaparral is mounted on a tracked vehicle equipped with four rails, each holding a missile in a ready-to-fire condition. A gunner in the turret aims by keeping his optical sight aligned with the target. After launch, Chaparral automatically homes in on the target's heat source by means of an infrared guidance system.

Subroc. The Subroc underwater-to-underwater antisubmarine missile went a long way toward deployment on all U.S. nuclear-powered attack submarines as a result of successful test firings late in the spring of 1965. A number of the missiles launched at that time from the nuclear submarine *Plunger* in the Pacific Ocean achieved a high "on-target" score during the test series, which encompassed complete tactical ranges and depths.

Subroc, armed with a nuclear warhead and inertially guided, has a range of 25 to 30 miles. It is propelled by a solid fuel, weighs 4,000 pounds, is 21 feet long, and measures 21 inches in diameter. The weapon is designed for launch from a conventional torpedo tube using the standard torpedo ejection system. Its rocket motor ignites under water shortly after the missile leaves the tube. Streaking to the surface, the missile emerges into the atmosphere,

U.S. ARMY

U.S. ARMY'S LANCE ballistic missile, designed for division support, hits bullseye in first test firing in March.

where it reaches supersonic speed. At a predetermined point, the rocket motor separates from the warhead or depth bomb section, which arcs in a ballistic path toward its target. Upon reentry into the water, the bomb sinks and detonates.

Shillelagh. The Shillelagh surface-to-surface missile was chosen in 1965 as the weapon for a U.S.-West German battle tank that is being developed for the 1970's.

Mauler. In the summer of 1965, the U.S. Army cancelled the Mauler development program, which had cost about $200 million. A Pentagon announcement gave "technical difficulties" as the reason for ending the program to develop this mobile air-defense system for front-line troops. More pointed reasons hinted at were recent improvements in the Hawk missile system and the good outlook for simpler and cheaper defense systems such as combinations of Chaparral and automatic antiaircraft guns.

STRATEGIC MISSILES

In the first six months of 1965, the U.S. inventory of ready-to-fire ICBM's (intercontinental ballistic missiles) shrank from a high of nearly 950 to 854. The reduction was part of the ICBM modernization program announced by Secretary of Defense Robert S. McNamara at the end of 1964. By mid-1965 all 126 obsolete Atlas missiles and all 54 outmoded Titan 1's had been removed from their operational sites. In October the last of the Polaris A-1 missiles on nuclear-powered submarines were replaced with improved Polaris models.

Minuteman. In 1966, Minuteman 2 will begin replacing Minuteman 1. The program of developing, building, and installing the advanced missiles in the 800 silos occupied by the old model will cost more than $1 billion, according to Air Force estimates. The Minuteman 2 program calls for 1,000 operational missiles. Meanwhile, on June 30, 1965, the last of the 800 Minuteman 1's was officially declared operational and was turned over to the Fifth Wing of the Strategic Air Command (SAC) at Warren AFB, Wyo.

Minuteman 2 can hurl a one-megaton nuclear warhead 7,000 nautical miles, or 700 miles farther than Minuteman 1, with a kill capacity eight times as great. Earlier reports had credited the new missile with a range of 9,000 nautical miles. This large increase in range was subsequently sacrificed to improve the missile's inertial guidance system and payload, and therefore its kill capacity.

The development of Minuteman 1, at a cost of more than $6 billion, had given the United States its first solid-fuel ICBM system. Minuteman 1 could react in 32 seconds and was much less costly to operate and maintain than its cyrogenic liquid-fueled predecessors such as Atlas and Titan 1. In mid-1965, only Titan 2, SAC's noncyrogenic liquid-fueled ICBM, remained operational to complement Minuteman.

Not daring to pause in ICBM development, the Air Force affirmed that Minuteman 2 and Titan 2 had many possible improvements in store for them. New propellants, if substituted for present Titan 2 propellants, "could double the payload capability that can be delivered from Titan silos," said Brig. Gen. H.J. Sands, Jr., commander of the Air Force Ballistic Systems Division. He explained, "We are investigating storable metallic thixotropic fuels in which the propellant is jelled to keep the metal powder in suspension—which combines some of the best properties of both solid and liquid cyrogenic fuels."

Another possible improvement called for the cold launch of siloed ICBM's. A missile would simply be popped out of its hole by hot gases generated beneath the weapon. Once the missile was clear of its silo, the ICBM booster stage would ignite. This launching system is similar to the one used for Polaris missiles and was successfully demonstrated when a 160-ton "boilerplate" missile was hurled out of a Minuteman silo in a test by the Air Force Rocket Propulsion Laboratory in June 1965. The Air Force cited advantages such as no missile ignition in the silo, no exhaust ducts or silo damage, and greater utilization of silo space for missiles of much larger diameters.

Another promising technique involved frustrating an enemy's antimissile missile system by using a maneuverable reentering warhead. North American Aviation's Autonetics Division announced in August 1965 that it had received an Air Force contract to develop such a reentry vehicle for Minuteman 2.

Polaris. Operational life for the Navy's Polaris A-1 surface-to-surface missile ended in October 1965 when the nuclear submarine *Abraham Lincoln* docked at New London, Conn., for overhaul. The A-1 was the 1,200-nautical-mile member of an illustrious missile family that also includes Polaris A-2 (1,500 miles), Polaris A-3 (2,500 miles), and Poseidon (2,500 miles). Since 1960 the Navy had deployed 29 of the planned 41 Polaris-carrying nuclear submarines. The last five to carry the A-1 were fitted with the A-3 in 1965. The launching of the *Kamehameha* near the end of the year brought the number of Polaris submarines to 32 commissioned, 7 launched but not commissioned, and 2 under construction. In 1968, when all 41 are operational, 13 will be carrying the Polaris A-2 and 28 the A-3.

Poseidon. When Poseidon becomes operational, probably in 1969, it will give the Polaris submarine fleet increased flexibility both in the types of targets it can attack and the amount of damage it can

AVIATION WEEK

"BIG BROTHER," a mammoth three-stage Soviet "orbital missile" and space booster, is 115 feet long. It was first shown in 1965 Moscow May Day parade.

inflict. In announcing the program early in 1965, President Johnson said the advanced missile's effectiveness "against a hardened target will be some eight times greater than the latest version of Polaris." The cost of developing Poseidon will be about $900 million, according to Defense Secretary McNamara. He estimated an additional $1.2 billion for production costs and for retrofitting 19 nuclear submarines to handle the missiles.

AEROSPACE DEFENSE

U.S. defense against incoming ballistic missiles inched closer to reality in 1965 with further development of the Nike-X antimissile missile system. In favor of this weapons system was the absence of any realizable competitor. Disadvantages included its deployment cost, estimated at $8–$10 billion, and its point-defense character, which means that areas of the country would have to go undefended. However, no complete defense against ballistic missiles was considered possible.

Nike-X. More than $2 billion had been invested in the Nike-X system, components of which had been under development since 1955. The system comprises the high-acceleration Sprint missile, designed to intercept warheads seconds before they are due to strike, and the Zeus missile, derived from the Nike Zeus and designed to intercept warheads during their terminal descents into target areas. The system will defend against ICBM's of the 1970's if the Defense Department approves its production.

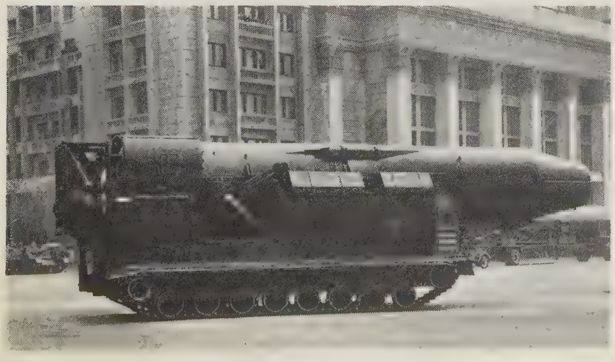
Sprint passed its first flight test in March 1965 and "exceeded our fondest hopes," an Army spokesman said. In this test of its propulsion system and structure, the 27-foot missile roared into the sky from an above-the-ground launcher. The operational missile would be cold-launched from a hardened silo, after which its rapid-acceleration motors would ignite. During 1965 the Army was arranging for these "pop up" tests of Sprint. At the same time the service was keeping track of Hibex, an experimental vehicle expected to have an even higher rate of acceleration than Sprint. It is under advanced development by the Defense Department's Advanced Research Projects Agency.

A program to upgrade the Zeus missile was begun late in 1965 when Western Electric Co. received a $21.5 million contract to extend Zeus' accuracy and range. The new version will be slightly longer than the present 48.3-foot model and will be heavier. Its slant range for an intercept is expected to be increased from 200 to 400 nautical miles.

U.S. MISSILE TECHNOLOGY

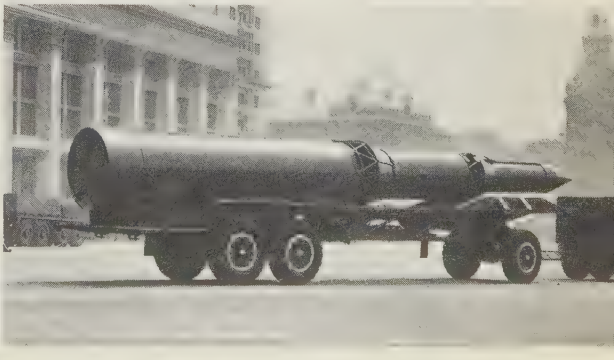
Guidance and propulsion continued to dominate the research work of U.S. missile developers during 1965. The quest for a solid rocket that could be pulsed was pursued with some success by Aerojet-General, Lockheed Propulsion, and other companies. Aerojet demonstrated a fully controllable, toroidal solid motor suitable for applications such as space-station docking or intercept maneuvers. These ap-

"IRON MAIDEN," a Soviet battlefield missile shown on May Day, is believed equivalent to U.S. Army's Pershing.



"LITTLE SISTER," also unveiled on May Day, is a three-stage 60-foot ICBM, similar in size to USAF Minuteman 2.

AVIATION WEEK PHOTOS



plications would require intermittent operation and precise control of total impulse. During the test at Aerojet's Sacramento facility, the motor was throttled on command over a considerable thrust range. Lockheed reported the successful firing of a flightweight, three-pulse, restartable solid engine designed for an air-launched tactical missile. The propellant was a rubber-based polycarbutene formulation with the first grain center-perforated for greater burning surface and thrust level than the sustainer and dash grains.

The Air Force reported a significant step forward in the program to develop a second-generation liquid booster system to compete with large solids. The service successfully tested a cluster of eight thrust chambers of 25,000 pounds thrust each, mounted around a zero-length plug nozzle to form an engine with 200,000 pounds thrust.

The first flight test of the U.S. Navy's Simplified Inertial Guidance System (SIGS) was made in August 1965 at White Sands Missile Range, N. Mex. The SIGS had been developed primarily to lower the cost of existing inertial guidance systems, possibly by 80% to 90%. The test was made by putting the SIGS aboard an Army Sergeant missile. After 20 seconds of the boost phase, the guidance system of the Sergeant failed, but the SIGS operated for an additional 11 seconds and was "perfect in all respects in all phases of the flight," the Navy said.

DEVELOPMENTS IN OTHER COUNTRIES

The U.S. experiment to prove practicable a NATO multilateral force (MLF) of 25 Polaris-equipped surface ships came to a quiet end on Dec. 1, 1965, when the guided-missile destroyer *Claude V. Ricketts* returned to the U.S. fleet. Outfitted with surface-to-air Terrier missiles, commanded by an American captain, and manned by a crew originally drawn from seven nations, the *Ricketts*, during its 14-month cruise, had failed to breathe life into the MLF concept.

Soviet Union. The USSR boasted on Nov. 7, 1965, that it had "orbital missiles whose warheads can without warning deliver their blow to an aggressor at the first or any other loop around the earth." The warheads would be launched by a 115-foot, three-stage mammoth missile, which was first shown in the May Day parade in Moscow. Top U.S. military analysts said that an orbiting warhead was far less efficient than an ICBM fired from an earthbound launcher, chiefly because of the amount of command and control equipment an orbiter must contain. Moreover, nuclear weapons in orbit are vulnerable and can be destroyed by U.S. antisatellite weapons.

Among the new Soviet missiles shown in 1965 were: (1) the new "orbital missile," also described by the Russians as the type used to launch their manned spacecraft into orbit, and nicknamed Big Brother by Western observers; (2) a smaller three-stage solid-propellant ICBM, about 60 feet long, nicknamed Little Sister and similar to Minuteman 2 in size; and (3) an ugly-looking missile carried on a tracked vehicle with hydraulic lifts to raise the missile to its launch angle; called Iron Maiden by Westerners, this missile was believed to be equivalent to the U.S. Army's surface-to-surface Pershing.

Great Britain. In an economy move, the British government announced in February 1965 that it would build only four of the five Polaris submarines originally planned. However, the announcement ended earlier speculations that the entire project would be cancelled. The vessels would be equipped with Polaris A-3's bought from the United States, but would be fitted with British-built nuclear warheads.

DIRECTORY OF MAJOR U.S. MISSILES

Missile	Status[1]	Service	Approx. range[2]	Engine type
		Surface-to-Surface		
Atlas	R	Air Force	5,500–9,000	Liquid rocket
Davy Crockett	O	Army	short	Solid rocket
Honest John	O	Army	12–20	Solid rocket
Lance	D	Army	3–30	Storable liquid
Little John	O	Army	10	Solid rocket
Mace A	O	Air Force	650+	Solid/turbojet
Mace B	O	Air Force	1,200+	Solid/turbojet
Minuteman I	O	Air Force	6,300	Solid rocket
Minuteman II	O	Air Force	7,000	Solid rocket
Pershing	O	Army	100–400	Solid rocket
Polaris A-1	R	Navy	1,200	Solid rocket
Polaris A-2	O	Navy	1,500	Solid rocket
Polaris A-3	O	Navy	2,500	Solid rocket
Poseidon	D	Navy	2,500	Solid rocket
Regulus I	O	Navy	500	Solid/turbojet
Sergeant	O	Army	75+	Solid rocket
Shillelagh	D	Army	short	Solid rocket
Titan I	R	Air Force	5,500	Liquid rocket
Titan II	O	Air Force	6,300	Storable liquid
		Antisubmarine		
Alfa	O	Navy	1,000[3]	Solid rocket
Asroc	O	Navy	8	Solid rocket
Subroc	P	Navy	25–30	Solid rocket
		Anti tank		
Entac	O	Army	2,200[3]	Solid rocket
M-72 rocket grenade	O	Army	500[3]	Solid rocket
SS-10	O	Army	1,600[3]	Solid rocket
SS-11	O	Army	3,800[3]	Solid rocket
Tow	D	Army	. . .	Solid rocket
		Ship-to-Shore		
Close-support assault weapon	D	Navy	30	Solid rocket
		Surface-to-Air		
Bomarc A	R	Air Force	200	Liquid/ramjet
Bomarc B	O	Air Force	400	Solid/ramjet
Chaparral	D	Army	. . .	Solid rocket
Hawk	O	Army	22	Solid rocket
Mauler	C	Army	. . .	Solid rocket
Nike-Hercules	O	Army	75	Solid rocket
Redeye	P	Army-Marines	2	Solid rocket
Sprint	D	Army	20–30	Solid rocket
Talos	O	Navy	65	Solid/ramjet
Tartar	O	Navy	10	Solid rocket
Terrier	O	Navy	10	Solid rocket
Zeus	D	Army	200–400	Solid rocket
		Air-to-Air		
Falcon	O	Air Force	5	Solid rocket
Genie	O	Air Force	6	Solid rocket
Phoenix	D	Navy	. . .	Solid rocket
Sidewinder	O	Navy-AF	2+	Solid rocket
Sparrow III	O	Navy	5–8	Solid rocket
		Air-to-Surface		
Bullpup B, C	O	Navy-AF	6	Storable liquid
Condor	D	Navy	40	. . .
Hound Dog	O	Air Force	600	Turbojet
Quail (decoy)	O	Air Force	250	Turbojet
Quail (advanced)	D	Air Force	400	Turbojet
Shrike	O	Navy	. . .	Solid rocket
SRAM	D	Air Force	. . .	. . .
Walleye	D	Navy	Several	None
Zuni	O	Navy	5	Solid rocket

[1] Status code: C, cancelled; D, under development; O, operational; P, production; R, retired. [2] Nautical miles unless otherwise indicated; 1 nautical mile equals 1.15 statute miles. [3] Range in yards.

France. The *Suffren*, the first frigate equipped with French-made missiles, was launched in mid-May 1965 at Lorient, France. To be commissioned in 1967, the frigate was equipped with Masurca antiaircraft and Malafon antisubmarine missiles. The *Suffren*, together with a sister ship, the *Duquesne* (under construction at Brest), will be used to escort the aircraft carriers *Clemenceau* and *Foch*.

Sweden. The Swedish air force put its 11.5-foot, 660-pound air-to-surface missile system into production during 1965. It will be used first aboard the Saab 105 jet attack aircraft, and then with the new Saab 37 Viggen multipurpose STOL (short takeoff and landing) aircraft. This solid-motor, supersonic missile was designed primarily for low-level attack.

WILLIAM S. BELLER
Senior Editor
"Missiles and Rockets" Magazine

ZION HILL BAPTIST CHURCH

BURNED NEGRO CHURCH at McComb, Miss., is shown in photograph exhibited at hearing held by the U.S. Civil Rights Commission in Jackson on February 17. Members of the commission (l. to r., at table) include Robert S. Rankin, Erwin N. Griswold, John Hannah (chairman), and Mrs. Frankie Muse Freeman.

WIDE WORLD

MISSISSIPPI

The collapse of barriers to the Negro's right to vote and a major effort by state leaders to gain public acceptance of national civil rights legislation were the chief political developments in Mississippi in 1965. As a result, gradual improvement in race relations was evident.

Voting Rights. Early in the year Gov. Paul B. Johnson, Jr., began a series of addresses to law-enforcement officers, municipal and county officials, and other groups in which he urged compliance with national civil rights legislation. Anticipating that Congress would pass a voting rights bill, the governor called a special session of the Legislature. Meeting from June 14 to July 10, the Legislature, upon the governor's recommendation, repealed various laws that had raised barriers to voting by Negroes. The Legislature also proposed a constitutional amendment that would eliminate the requirements that a prospective voter be of good moral character," that he be able to interpret a section of the state constitution, and that he write an essay on the duties and obligations of a citizen. After a campaign in which most of the state's political leaders supported the amendment, the voters approved it on August 17 by a vote of 137,236 to 50,748.

After Congress passed the Voting Rights Act of 1965, federal voting registrars were sent into selected Mississippi counties. By December 31 these officials were assigned in 18 counties and had registered a total of 27,385 persons, most of them Negroes. Disputes between state and federal officials over whether names should be transferred from the federal rolls to state rolls without complying with the state literacy requirement led to lawsuits that resulted in state court action enjoining such transfers. The Department of Justice requested the U.S. Supreme Court to rule on the issue.

Other Civil Rights Developments. Gradual acceptance of the national Civil Rights Act of 1964, which barred discrimination in most places of public accommodation, was evident in 1965. On February 5 the governing board of the Mississippi Chamber of Commerce urged compliance with the law. The U.S. Civil Rights Commission held hearings in Jackson from February 10 to 20 at which state leaders in business, education, and government appeared. When the hearings adjourned, Chairman John A. Hannah, president of Michigan State University, reported "encouraging signs of change" in Mississippi. During 1965 all state colleges and universities and most public schools took steps to comply with the law, and thereby qualified for federal support funds. Most schools also had at least token racial integration of students.

Demonstrations in Natchez drew attention to the difficulty in adjusting to racial equality. George Metcalfe, local president of the NAACP, was injured seriously in Natchez on August 27 when a bomb exploded in his automobile. Subsequent demonstrations by Negro groups demanding equality in public accommodations and a voice in government led to the use of the Mississippi National Guard to maintain order, the arrest and jailing of about 500 demonstrators, and the issuance of a federal court order protecting the rights of the demonstrators. A Negro boycott hurt Natchez merchants. On December 3, city officials and businessmen acceded to the demands of the Negroes. Late in December, Negroes launched a similar boycott in Fayette.

There were also attempted marches on the Capitol building in Jackson during the special session of the Legislature in June and July. Demonstrators protested the alleged unconstitutionality of the Legislature because of its failure to reapportion its membership. After the arrest and jailing of about 1,000 persons, this group obtained a federal court order protecting its right to march.

U.S. District Judge W. Harold Cox ruled on February 26 that Neshoba County Sheriff Lawrence A. Rainey and 16 other men had to stand trial on a misdemeanor charge of conspiring to violate a law forbidding the infliction of summary punishment without due process of law, in connection with the slaying of three civil rights workers near Philadelphia, Miss., on June 21, 1964. Cox let stand indictments against Rainey and two others for actually violating the law, but he dismissed similar indictments against the 14 other defendants.

On May 5, 1965, the U.S. Court of Appeals for the Fifth Circuit dropped criminal and civil contempt proceedings that it had instituted against former Governor Ross R. Barnett and Paul Johnson,

MISSISSIPPI · Information Highlights

Area: 47,716 square miles.

Population: 2,320,000 (1965 est.).

Chief Cities (1965 est.): Jackson, the capital (161,000); Meridian (53,500); Biloxi (46,500); Greenville (45,400); Hattiesburg (38,500); Gulfport (33,500); Vicksburg (28,800); Laurel (28,500).

Government: *Chief Officers*—governor, Paul B. Johnson (Democrat); lt. gov., Carroll Gartin (D); secy. of state, Heber Ladner (D); atty. gen., Joe T. Patterson (D); treas., William F. Winter; supt. of pub. instr., J.K. (Jack) Tubb; chief justice, W.N. Ethridge, Jr.; *Legislature*—Mississippi Legislature (convened Jan. 4, 1966); Senate, 52 members (51 Democrats, 1 Republican); House of Representatives, 122 members (120 D, 2 R).

Education: *School enrollment* (1964–65)—public elementary, 461,500 pupils (11,234 teachers); public secondary, 147,000 pupils (8,404 teachers); nonpublic schools, 21,800 pupils (850 teachers); college and university (fall 1964), 48,298 students. *Public school expenditures* (1964–65)— $145,600,000 ($273 per pupil); average teacher's salary, $4,103.

Public Finance (fiscal year 1964): *Revenues,* $432,220,000 (3% sales tax, $89,003,000); motor fuel tax, $55,937,000; federal funds, $123,320,000). *Expenditures,* $450,944,000 (education, $156,129,000; health, welfare, and safety, $72,786,000; highways, $125,472,000. *State debt,* $108,510,000 (1964).

Personal Income (1964): $3,328,000,000; average annual income per person, $1,438.

Public Assistance (fiscal year 1964): $64,214,000 (aged, $33,455,000; dependent children, $9,389,000).

Labor Force (employed persons, July 15, 1965): *Agricultural,* 154,700; *nonagricultural* (wage and salary earners), 480,500 (32.0% manufacturing, 19.3% trade, 20.7% government). *Unemployed persons* (July 15, 1965)—25,500.

Manufacturing (1963): Value added by manufacture, $1,022,498,000 (transportation equipment, $60,450,000; primary metals, $7,380,000; nonelectrical machinery, $42,335,000; electrical machinery, $49,437,000; fabricated metals, $53,264,000; food and products, $133,437,000).

Agriculture (1964): *Cash farm income,* $806,274,000 (livestock, $291,964,000; crops, $492,154,000; govt. payments, $22,156,000). *Chief crops* (tons)—cottonseed, 911,000 (ranks 2nd among the states); corn for grain, 791,000 (rank, 18th); rice, 92,000 (rank, 5th); tung nuts, 68,000 (rank, 1st); sweet potatoes, 39,000 (rank, 7th); pecans, 6,000 (rank, 3rd); peanuts, 1,050 (rank, 10th).

Mining (1964): *Production value,* $212,193,000 (ranks 22nd among the states). *Chief minerals* (tons)—petroleum, 56,777,000 barrels (ranks 9th among the states); natural gas, 181,414,000,000 cubic feet (rank, 9th); sand and gravel, 7,825,000; stone, 1,553,000; clays, 1,331,000.

Fisheries (1964): *Commercial catch,* 331,897,489 pounds ($8,045,086). *Leading species*—menhaden, 237,832,600 pounds ($3,131,440); shrimp, 6,416,024 pounds ($1,804,829); oysters, 4,828,600 pounds ($1,098,736); red snapper, 1,849,190 pounds ($460,872).

Transportation: *Roads* (1964), 65,107 miles (21,506 paved); *motor vehicles* (1965), 927,997; *railroads* (1964), 4,929 miles; *airlines* (1965), 3 (120 airports).

Communications (1965): *Telephones,* 574,100; *television stations,* 9; *radio stations,* 82; *newspapers,* 19 (daily circulation, 305,475).

then lieutenant governor, for attempting in 1962 to prevent the admission of James Meredith, a Negro, to the University of Mississippi.

Politics. Three Negroes representing the Freedom Democratic party sought in 1965 to unseat three Mississippi members of the U.S. House of Representatives. Attorneys for the contesting persons tried to establish that the election of the congressmen was invalid because Negroes were excluded from the polls. The challenge was finally rejected by the House on September 17, by a vote of 228 to 143.

In municipal elections on June 9, Columbus and Hattiesburg chose Republican mayors. A third Republican was added to the state Senate from Panola County in a special election on August 31.

Economy. In 1965, for the first time, manufacturing employment exceeded agricultural employment in the state. Paper manufacturing plants are planned for Crosby and Monticello. In May a state trade mission visited a number of European countries, and in November a similar mission, headed by Governor Johnson, visited Latin American countries. Both missions, sponsored by the Mississippi Marketing Council, sought orders for state-manufactured goods.

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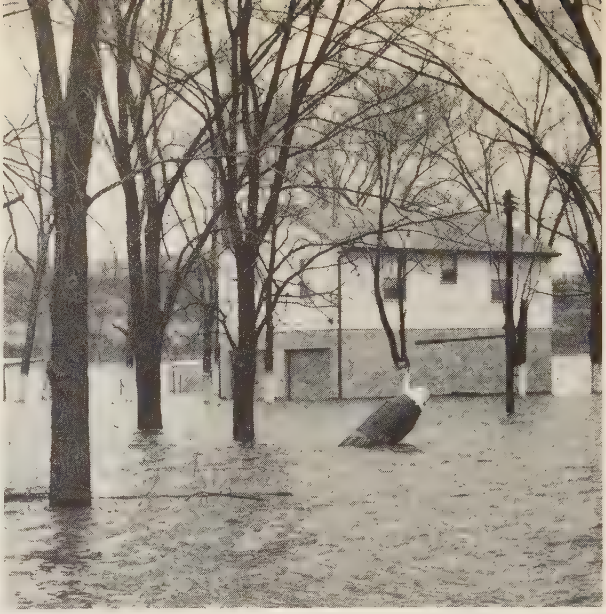

MISSOURI

A new state administration took office in Missouri on Jan. 11, 1965, when Democrat Warren E. Hearnes succeeded John Dalton, also a Democrat, as governor. As a result of the 1964 elections, Democrats

MISSOURI · Information Highlights

Area: 69,686 square miles.

Population: 4,446,000 (1965 est.).

Chief Cities (1965 est.): Jefferson City, the capital (29,700); St. Louis (710,000); Kansas City (530,000); Springfield (103,500); Independence (97,000); St. Joseph (77,000); Florissant (54,000); University City (52,500).

Government: *Chief Officers*—governor, Warren E. Hearnes (Dem.); lt. gov., Thomas F. Eagleton (D); secy. of state, James C. Kirkpatrick (D); atty. gen., Norman H. Anderson (D); treas., M.E. Morris (D); supt. of pub. education, Hubert Wheeler; chief justice, Clem F. Storckman. *Legislature*—General Assembly (convened Jan. 6, 1965); Senate, 34 members (23 Democrats, 11 Republicans); House of Representatives, 163 members (123 D, 40 R).

Education: *School enrollment* (1964–65)—public elementary, 690,000 pupils (23,872 teachers); public secondary, 245,000 pupils (12,516 teachers); nonpublic schools, 190,200 pupils (5,510 teachers); college and university (fall 1964), 118,266 students. *Public school expenditures* (1964–65)—$359,000,000 ($437 per pupil; average teacher's salary, $5,660.

Public Finance (fiscal year 1965): *Revenues,* $782,906,173 (3% sales tax, $215,909,542; gross motor fuel tax, $94,257,955, including $7,855,364 refunded during the year; federal funds, $234,492,330). *Expenditures,* $744,359,971 (education, $212,689,242; health, welfare, and safety, $194,680,058; roads and highways, $229,947,120). *State debt,* $51,650,000 (June 30, 1965).

Personal Income (1964): $11,463,000,000; average annual income per person, $2,600.

Public Assistance (fiscal year 1965): $101,307,855 to 231,327 recipients (aged, $55,968,295; dependent children, $24,169,219).

Labor Force (employed persons, July 15, 1965): *Agricultural,* 198,600; *nonagricultural* (wage and salary earners), 1,465,600 (28.1% manufacturing, 22.3% trade, 15.1% government). *Unemployed persons* (July 15, 1965)—64,500.

Manufacturing (1963): Value added by manufacture, $4,424,148,000 (transportation equipment, $1,131,650,000; primary metals, $151,003,000; nonelectrical machinery, $275,412,000; electrical machinery, $235,621,000; fabricated metals, $270,584,000; food and products, $631,991,000).

Agriculture (1964): *Cash farm income,* $1,240,825,000 (livestock, $736,145,000; crops, $408,616,000; govt. payments, $96,064,000). *Chief crops* (tons)—hay, 5,106,000 (ranks 6th among the states); corn for grain, 4,388,000 (rank, 7th); wheat, 1,393,000 (rank, 10th); sorghum for grain, 264,000 (rank, 7th); oats, 188,000 (rank, 14th); apples, 38,000 (rank, 18th); rye, 18,000 (rank, 12th).

Mining (1964): *Production value,* $189,305,000. *Chief minerals* (tons)—coal, 3,254,000 (ranks 12th among the states); iron ore, 1,250,000 (rank, 8th); lime, 1,219,000 (rank, 5th); barite, 266,814 (rank, 1st); lead, 120,148 (rank, 1st).

Fisheries (1963): *Commercial catch,* 349,000 pounds ($40,000).

Transportation: *Roads* (1964), 100,828 miles (35,042 hard-surfaced); *motor vehicles* (1965), 2,034,203; *railroads* (1965), 7,059 miles; *airlines* (1965), 10 (297 airports).

Communications (1965): *Telephones,* 2,067,200; *television stations,* 19; *radio stations,* 126; *newspapers,* 53 (daily circulation, 1,807,842).

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UPI PHOTOS

HEAVY FLOODS inundated Missouri towns of Portage des Sioux *(left)* and Hannibal *(right)* in April 1965 when northern snows melted in sudden thaw and forced Mississippi River over its banks.

retained control of all major state offices and increased their majorities in the General Assembly. The Democrats hold a 123-to-40 majority over Republicans in the House of Representatives and a 23-to-11 margin in the Senate.

Despite Democratic control of both the executive and legislative branches, the year began with considerable friction between Governor Hearnes and the Democratic leaders in the legislature. Candidates supported by Governor Hearnes failed in bids for legislative leadership posts. The internal party disputes resulted in part from the bitter 1964 Democratic primary battles, in which Hearnes (then secretary of state) defeated the candidate supported by most state party leaders.

Reapportionment. The major issue facing the 1965 Missouri legislative session was reapportionment. Federal courts had ordered the reapportionment of both houses of the General Assembly and of the state's 10 federal congressional districts. Reapportionment of the federal congressional and state senatorial districts was accomplished by bipartisan commissions. Reapportionment of the State House of Representatives, however, required a constitutional amendment. The House at first rejected a proposal for reapportionment by a bipartisan commission and insisted on working out its own plan. The plan adopted was submitted to the voters in a special election on August 17. It failed to get even a simple majority.

Governor Hearnes called a special session of the legislature in November to work out a new procedure for reapportionment. This time the governor won authorization to appoint a bipartisan commission to work out a new House reapportionment scheme. The new plan will be presented to the voters in January 1966. Legislative reapportionment will give greater representation to the state's two major metropolitan areas, St. Louis and Kansas City.

Gubernatorial Succession. An amendment to the state constitution that will permit Missouri governors to serve two consecutive terms won overwhelming approval from state voters in the August 17 special election. This measure, strongly endorsed by Governor Hearnes, won support from most leaders of both political parties, but was strongly opposed by House Speaker Thomas D. Graham.

Legislation. Despite the initial leadership struggles between governor and legislature and differences over reapportionment and gubernatorial succession, the General Assembly made an unusually strong record of accomplishments. The legislators enacted 19 of the governor's 20 major legislative proposals. The first state conflict-of-interest law was passed. Legislation prohibiting racial and religious discrimination in public accommodations and services was passed, and provisions against discrimination in employment were strengthened. These measures made Missouri one of the leading states in civil rights legislation.

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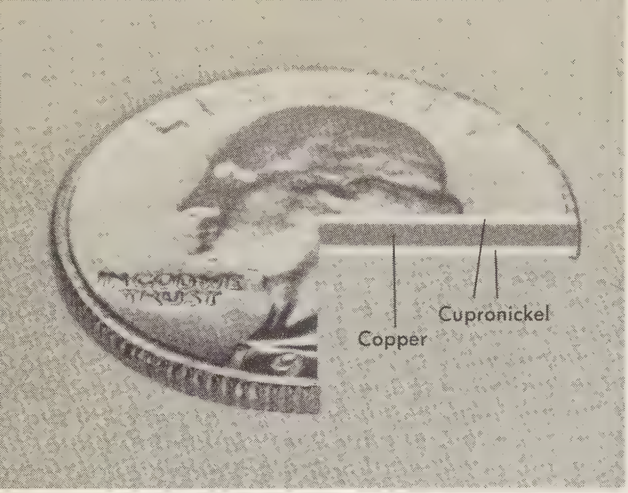
MONEY

Monetary conditions in the United States and in the world remained relatively calm during 1965. (For a discussion of the stability of the international money markets, see INTERNATIONAL FINANCE.)

U.S. Domestic Problems. U.S. monetary authorities faced two major domestic problems—inflation and coin shortages. Above all, they wished to refrain from any action that would dampen the economic upswing that continued for the fifth year in succession—the longest continuous advance in many decades. By the end of the year, however, pressures toward inflation resulting from the Vietnam war were becoming more worrisome. For the first time since 1952, prices showed signs of increasing at a rate that would give rise to concern if it continued. At the same time, the continuing balance-of-payments difficulties limited the freedom of the authorities to act without considering the international effects of any policies they adopted to meet domestic problems.

On the whole, the situation called for somewhat restrictive policies. By the end of the year the restraints on monetary policy had resulted in interest rates rising to levels that had not occurred since the



NEW QUARTERS issued by the U.S. Treasury in 1965 save silver. They are a composite of copper and layers of alloy.

boom of the 1920's. Even at these high rates, however, businesses and individuals were willing to borrow, and banks were willing to lend—more than in any previous year—so that credit could not be regarded as scarce.

The domestic coin shortage persisted in the United States, but was not as acute as in 1964. The continued high demand for silver, both for coinage and industrial use, has pushed up the price of the metal for several years, and it would have risen more if the U.S. Treasury had not released some of its stock for industrial use. The consequent foreseeable shortage of silver led the Treasury to make the first important change in the currency for many years. During 1965, it issued quarters as the first of a new type of coin with a copper center and cupronickel alloy surfaces. Because of their composite or "sandwich" construction, the new coins were referred to as "plywood" quarters. A new silverless dime and a new half-dollar that contains some silver were scheduled to be released in 1966. Cents, nickels, and silver dollars remained unchanged. Many problems had to be overcome so that the new coins would be of the same size and weight, and have virtually the same electrical conductivity as the old silver alloy coins, in order to activate telephones and other coin-operated devices. (See also COIN COLLECTING; METALLURGY.)

International Currencies. In 1965, Trinidad and Tobago adopted a new currency (the TT dollar); Ghana replaced the pound with the cedi, which has a new par value; Burundi adopted a par value for its franc; and the Philippine government changed the par value of its peso.

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PAR VALUES OF CURRENCIES OF MEMBER COUNTRIES OF THE INTERNATIONAL MONETARY FUND

Member	Currency unit	Par value (units per U.S. $1, Oct. 31, 1965)
Afghanistan	afghani	45.000
Algeria	franc	...[1]
Argentina	peso	...[2]
Australia	pound	0.4464
Austria	schilling	26.000
Belgium	franc	50.000
Bolivia	peso	...[2]
Brazil	cruzeiro	...[2]
Burma	kyat	4.762
Burundi	franc	87.500
Cameroun	CFA[3] franc	...[1]
Canada	dollar	1.081
Central African Republic	CFA[3] franc	...[1]
Ceylon	rupee	4.762
Chad	CFA[3] franc	...[1]
Chile	escudo	...[2]
China (Nationalist)	yuan	...[1]
Colombia	peso	...[2]
Congo (Brazzaville)	CFA[3] franc	...[1]
Congo (Léopoldville)	franc	...[1]
Costa Rica	colón	6.625
Cyprus	pound	0.3571
Dahomey	CFA[3] franc	...[1]
Denmark	krone	6.907
Dominican Republic	peso	1.000
Ecuador	sucre	18.000
Egypt	pound	0.3482[2]
El Salvador	colón	2.500
Ethiopia	dollar	2.500
Finland	markka	3.200
France	franc	4.937
Gabon	CFA[3] franc	...[1]
Germany, West	Deutsche mark	4.000
Ghana	cedi	0.8571
Great Britain	pound	0.3571
Greece	drachma	30.000
Guatemala	quetzal	1.000
Guinea	franc	...[1]
Haiti	gourde	5.000
Honduras	lempira	2.000
Iceland	króna	43.000
India	rupee	4.762
Iran	rial	75.750
Iraq	dinar	0.3571
Ireland	pound	0.3571
Israel	pound	3.000
Italy	lira	625.000
Ivory Coast	CFA[3] franc	...[1]
Jamaica	pound	0.3571
Japan	yen	360.000
Jordan	dinar	0.3571
Kenya	E. Afr. shilling	...[1]
Korea, South	won	...[1]
Kuwait	dinar	0.3571
Laos	kip	...[1]
Lebanon	pound	2.191[2]
Liberia	dollar	1.000
Libya	pound	0.3571
Luxembourg	franc	50.000
Malagasy Republic	franc	...[1]
Malawi	pound	...[1]
Malaysia	dollar	3.061
Mali	franc	...[1]
Mauritania	CFA[3] franc	...[1]
Mexico	peso	12.500
Morocco	dirham	5.060
Nepal	rupee	...[1]
Netherlands	guilder	3.620
New Zealand	pound	0.3596
Nicaragua	córdoba	7.000
Niger	CFA[3] franc	...[1]
Nigeria	pound	0.3571
Norway	krone	7.143
Pakistan	rupee	4.762
Panama	balboa	1.000
Paraguay	guarani	...[2]
Peru	sol	...[2]
Philippines	peso	3.900
Portugal	escudo	28.750
Rwanda	franc	...[1]
Saudi Arabia	riyal	4.500
Senegal	CFA[3] franc	...[1]
Sierra Leone	leone	0.714286
Somalia	shilling	7.143
South Africa	rand	.7143
Spain	peseta	60.000
Sudan	pound	0.3482
Sweden	krona	5.173
Syria	pound	2.191[2]
Tanzania	E. Afr. shilling	...[1]
Thailand	baht	20.800
Togo	CFA[3] franc	...[1]
Trinidad and Tobago	TT dollar	1.714
Tunisia	dinar	...[1]
Turkey	lira	9.000
Uganda	E. Afr. shilling	...[1]
United States	dollar	1.000
Upper Volta	CFA[3] franc	...[1]
Uruguay	peso	7.400[2]
Venezuela	bolivar	3.350
Vietnam, South	piastre	...[1]
Yugoslavia	dinar	...[2]
Zambia	pound	1.250

[1] Par value not yet established. [2] Most transactions in the exchange market take place at free market rates. [3] African Financial Community (Communauté Financière Africaine).

MONGOLIA

The government of Mongolia, led by Premier Yumzhagiyn Tsedenbal, further aligned itself in 1965 with Moscow in the continuing ideological dispute between the Chinese and Soviet Communist blocs.

Soviet Visit. In February a Soviet delegation headed by Aleksandr Shelepin, a member of the Soviet Communist party Presidium, visited Mongolia. During the visit the delegation toured the South Gobi district, just across the border from the Inner Mongolian Autonomous Region of Communist China, which had been the scene of pro-Chinese Communist dissension. At the conclusion of the visit, Mongolian Premier Tsedenbal reaffirmed his government's fidelity to the Soviet Union.

In late 1964, Tsedenbal was successful in purging from the Mongolian People's Revolutionary party a faction which had attempted to break Mongolia's staunch allegiance to Moscow in favor of a more pro-Chinese orientation.

New Aid Pact. Mongolia and the Soviet Union signed a 20-year mutual assistance pact on Jan. 15, 1966. The two governments announced at the time of the signing that they were in "complete unity" in the face of Chinese threats to split the world Communist movement.

To conclude the friendship and mutual aid pact, Moscow had sent a high-ranking delegation headed by Leonid Brezhnev, first secretary of the Soviet Communist party, to the Mongolian capital of Ulan Bator. The eminence of the delegation pointed up the fact that Moscow views Mongolia, which lies between Russia and China, as a strategic ally and buffer zone in Russia's struggle with Communist China.

MONGOLIA · Information Highlights

Area: 592,664 square miles.
Population: 1,050,000 (mid-1964 est.).
Chief City (1962 est.): Ulan Bator, the capital, 195,300.
Government: *Chief of State*—Zhamarangin Sambu (took office July 1954); *Premier*—Yumzhagiyn Tsedenbal (took office 1952). *Parliament*—Great People's Khural, 290 members, all belonging to the Mongolian People's Revolutionary party.
Principal Religious Faith: Lamaist Buddhism.
Education: *Literacy rate* (1956)—95% of population aged 9 to 50 years. *Total school enrollment* (1962)—153,559 (primary, 133,975; secondary and vocational, 10,400; higher, 9,184).
Finance (1962 est.): *Revenues,* $339,000,000; *expenditures,* $338,000,000; *monetary unit,* tugrik (4 tugrik equal U.S.$1).
Manufacturing: Gasoline (1960), 18,000 metric tons.
Principal Crops (1965 est.): Wheat, 500,000 metric tons; timber (1963 est.), 469,900 cubic meters.
Minerals (metric tons, 1964): Bituminous coal and lignite, 708,000; fluorite, 57,000; lime, 30,000; salt, 8,000; crude petroleum, 360,000 barrels.
Foreign Trade (1960): *Exports,* $70,000,000 (chief exports: cattle, horses, wool, hides, meat, butter); *imports,* $97,000,000 (chiefly consumer goods). *Chief trading partners:* USSR (took 80% of exports, supplied 60% of imports); Communist China (took 4% of exports, supplied 20% of imports).
Transportation: *Roads* (1961), 46,700 miles (5,300 motorable); *railways* (1963), 870 miles; *civil airline,* Mongolair; *principal airport,* Ulan Bator.
Communications: *Telephones* (1964): 12,234; *television stations* (1964), 1; *radios* (1963), 57,000; *newspapers* (1963), 2 (daily circulation, 92,000).

MONTANA

The 39th Montana Legislative Assembly convened in 1965 with Democratic majorities in both houses. Although the Republican governor and Democratic legislature exchanged political recriminations, they cooperated on many issues. The most controversial problem facing the state was that of reapportioning the legislature and the state's two congressional districts, as ordered by a federal court.

Reapportionment. After the state legislature failed to reach agreement on the reapportionment issue, a federal district court drew new boundaries for Montana's two congressional districts on July 7. The court transferred seven counties from District No. 2 to District No. 1, giving the former a population of 347,701 and the latter a population of 327,019. The newly apportioned legislature has 55 senators—a decrease of one—and 104 representatives—an increase of 10. Differences in legislative district populations now average about 4,000, whereas the former districts varied in population by as much as 78,000. The 1967 legislature may make changes in the apportionment, but the court's action generally met with wide approval.

Legislation. Legislative controversy centered on Gov. Tim Babcock's financial proposals. The first proposal would have continued the present 2-cent-

MONTANA · Information Highlights

Area: 147,138 square miles.
Population: 717,000 (1965 est.).
Chief Cities (1965 est.): Helena, the capital (22,000); Great Falls (64,500); Billings (58,000); Missoula (27,600); Butte (26,500); Bozeman (16,500); Havre (11,800); Anaconda (11,300).
Government: *Chief Officers*—governor, Tim Babcock (Republican); lt. gov., Ted James (R); secy. of state, Frank Murray (Democrat); atty. gen., Forrest H. Anderson (D); treas., Henry Anderson; supt. of pub. instr., Harriet Miller; chief justice, James T. Harrison. *Legislature*—Legislative Assembly (convened Jan. 4, 1965); Senate, 56 members (32 Democrats, 24 Republicans); House of Representatives, 94 members (56 D, 38 R).
Education: *School enrollment* (1964–65)—public elementary, 111,500 pupils (4,925 teachers); public secondary, 58,000 pupils (2,610 teachers); nonpublic schools, 23,800 pupils (850 teachers); college and university (fall 1964), 17,870 students. *Public school expenditures* (1964–65)—$79,000,000 ($516 per pupil); teacher's average salary, $5,635.
Public Finance (fiscal year 1964): *Revenues,* $211,397,000 (motor fuel tax, $20,010,000; federal funds, $70,028,000). *Expenditures,* $205,106,000 (education, $51,787,000; health, welfare, and safety, $14,808,000; highways, $74,718,000). *State debt,* $2,982,000 (1964).
Personal Income (1964): $1,587,000,000; average annual income per person, $2,252.
Public Assistance (fiscal year 1965): $14,887,615 to 18,112 recipients (aged, $4,558,172; dependent children, $3,081,093).
Labor Force (employed persons, July 1965): *Agricultural,* 48,400; *nonagricultural* (wage and salary earners), 217,600 (12.4% manufacturing, 23.7% trade, 24.7% government). *Unemployed persons* (July 1965)—3,100.
Manufacturing (1963): Value added by manufacture, $234,783,000 (fabricated metals, $3,185,000; food and products, $50,238,000; lumber and wood products, $67,294,000; petroleum and coal products, $27,384,000).
Agriculture (1964): *Cash farm income,* $441,606,000 (livestock, $203,272,000; crops, $191,078,000; govt. payments, $47,256,000). *Chief crops* (tons)—hay, 3,384,000 (ranks 14th among the states); wheat, 2,725,000 (rank, 4th); alfalfa, 2,044,000 (rank, 13th); barley, 1,211,000 (rank, 3rd); sugar beets, 983,000 (rank, 8th); oats, 160,000 (rank, 15th); rye, 10,800.
Mining (1964): *Production value,* $211,435,000 (rank, 24th). *Chief minerals* (tons)—lime, 136,000 (ranks 15th among the states); copper, 103,806 (rank, 3rd); zinc, 29,059 (rank, 9th); manganese, 20,264 (rank, 1st); silver, 5,290,000 troy ounces (rank, 3rd); petroleum, 30,647,000 barrels (rank, 11th).
Transportation: *Roads* (1965), 74,347 miles (10,294 paved); *motor vehicles* (1965), 417,429; *railroads* (1965), 6,707 miles; *airlines* (1965), 4 (313 airports).
Communications (1965): *Telephones,* 282,500; *television stations,* 8; *radio stations,* 34; *newspapers,* 14 (daily circulation, 206,324).

per-pack cigarette tax (originally approved to finance a veterans bonus) to provide a greatly needed public building fund. The second proposal would have imposed a straight $5 extra assessment for every state income tax return.

Instead of following the governor's proposals, the legislature referred a 3-cent cigarette tax to the people, and raised the state income tax on a graduated basis, beginning at 10%; it also increased the corporation tax nearly 16%. A hotly debated 1% surcharge levied on out-of-state contractors was later declared unconstitutional. The funds for the construction of public buildings were provided by apportioning 5% of the state's general fund for that purpose.

Other bills passed included enabling legislation for the federal Kerr-Mills Act, which provides medical care for the aged, and a bill for a new mental health institution.

Industry. Employment was high in Montana in 1965. Industrial expansion programs included those of Anaconda Aluminum ($20 million), Montana Power ($15 million), and Mountain States Telephone ($12 million). Federal expenditures included the completion, near Miles City, of a complex electronic system for detecting underground disturbances.

Construction. The $100 million Yellowtail Dam on the Bighorn River was completed. Preliminary work began on a $350 million dam on the Kutenai River, near Libby. The Montana Highway Commission announced that about one half of the state's 1,174 miles of highway in the interstate highway system had been built or assigned for construction.

Education. Record school enrollments continued in the state in 1965, although the growth rate was only 0.4%, as compared with an annual average of 2.2% for the past ten years.

The state university system reported an increase of 14.1% in the autumn quarter enrollment.

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MONTREAL

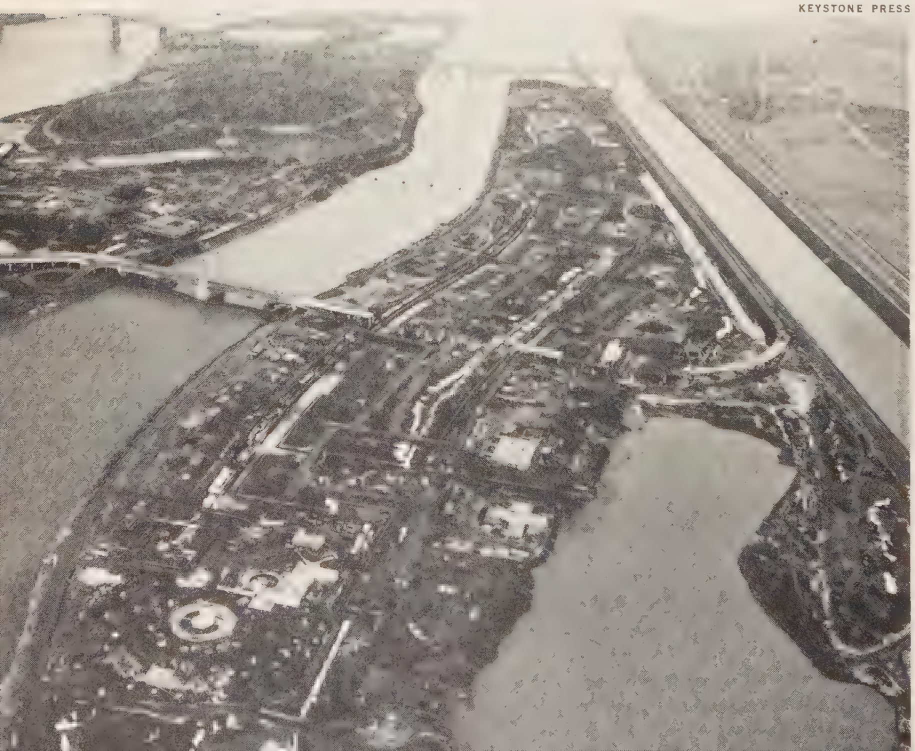
Montreal, Canada's largest city (1965 est. pop.: city, 1,200,614; metropolitan area, 2,019,509) and the world's largest inland port, continued in 1965 to prepare for the Canadian world's fair, scheduled to open in 1967. Urban renewal and development projects progressed during the year, and the city was beset by a number of strikes.

Expo '67. Montreal will be the site of the 1967 Canadian Universal and International Exposition, commonly known as Expo '67. More than 70 nations are expected to participate in the exposition. The exposition site was expanded to cover approximately 950 acres, including Île Sainte-Hélène and the completely man-made Île Notre-Dame, both in the St. Lawrence River. A bridge was built linking Mackay Pier to St. Helen's Island, and another was under construction to join St. Helen's Island and the Île Notre-Dame.

Transportation Projects. A number of other projects were completed in 1965, or will be completed before Expo '67 opens. The Montreal Island portion of the Trans-Canada Highway was completed with the opening of the Galipeault Bridge at the western end of the island. The Eastern Townships Autoroute between Montreal and Sherbrooke also was opened. (Plans call for the route to extend to the U.S. border by 1967.) Construction of the new $200 million Decarie Expressway, linking the Trans-Canada Highway and the southwest section of Montreal, was also planned.

Work progressed rapidly on Metro, Montreal's new subway system, scheduled to open in 1967. This 15-mile line will have three separate routes: one running north to south; another, east to west; and a third, from the South Shore area to the Expo '67 site.

Urban Renewal and Development. Over the next few years, approximately 20 acres of the city will undergo a face lifting. The center of the redevelopment will be McGill College Avenue, which will become a


KEYSTONE PRESS

MONTREAL will be host to the 1967 Canadian Universal and International Exposition. The site of the fair includes Île Sainte-Hélène (left) and Île Notre-Dame (center), in the St. Lawrence River.

boulevard flanked by two 24-story towers with a plaza, shopping mall, and commercial center. The complex also will include a 15-story professional building. This multistage, $125 million project will be undertaken jointly by the T. Eaton Company of Canada Ltd. and the First National Property Corporation, which have formed Mace Ltd. for the development.

New Buildings. The newest addition to the Montreal skyline in 1965 was the 47-story Place Victoria, which houses the Montreal and the Canadian stock exchanges. The International Business Machines building, the final section of the Place Ville-Marie, a midtown office and shopping complex, neared completion.

Strikes. Montreal was beset by a number of strikes during 1965, beginning with a strike during the New Year's holiday season by the Quebec Liquor Commission. The most crippling strikes, however, were two separate transit strikes and a postal strike. The transportation strikes in June involved the Montreal Transportation Commission, which provides transportation within the metropolitan area, and the Provincial Transport Company, which provides commuter service to the city. Both strikes lasted two weeks.

In July the city was hit by a three-week walkout by its postal employees as part of a nationwide postal strike that disrupted most of Canada's postal services. In the same month, a three-day gasoline vendors strike, which threatened to damage the city's tourist trade, was marked by violence against a few small establishments that refused to close.

Government and Finance. Montreal, with 70% of its population French speaking, is governed by Mayor Jean Drapeau and a 45-member City Council. The city's finances for the 1965 fiscal year included: revenues, $242,702,511; expenditures, $234,903,610; real estate and school tax rate, $3.17 per $100 of assessed valuation. Among business indicators, the consumer price index was 138.1 (1949=100) on July 1, 1965, and the employment index for the first nine months of 1965 was 136.1 (1949=100).

THOMAS J. PLUNKETT
Municipal Affairs Consultant, Montreal

MORMONS. See CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS.

MORO, Aldo. See biographical sketch under ITALY.

MOROCCO

The street riots that broke out in Casablanca in March 1965 forced the Moroccan monarchy to act promptly to reverse the political deterioration that has characterized the last several years. On June 7, 1965, King Hassan II dissolved the coalition cabinet headed by Prime Minister Ahmed Bahnini. Bahnini had become prime minister in 1963, and was considered a close ally of the king. The new cabinet, headed by the king himself, announced that it would govern for an indefinite period of time under emergency powers.

Riots. Spontaneous rioting broke out in Casablanca on March 22, 1965. Some 25 persons were killed and several hundred injured before the demonstrations ceased three days later. The riots began among high school students when the government announced that it would cut back enrollments in advanced classes and place students over 17 in technical schools. On the second day the students were joined in their protests by nonstudents and unem-

A.F.P. FROM PICTORIAL PARADE

MOROCCO was scene of September 1965 Arab summit meeting. Attending conference were Algeria's Boumedienne (3rd from left, center), Saudi Arabia's King Faisal (in Arab robes), UAR's Nasser (center) and King Hassan II (in fez).

MOROCCO · Information Highlights

Area: 171,834 square miles.
Population: 12,959,000 (July 1, 1964, est.).
Chief Cities (1960 census): Rabat, the capital, 227,445; Casablanca, 965,277; Marrakech, 243,134; Fez, 216,133.
Government: *King and Premier*—Hassan II. *Parliament*—Chamber of Councillors, 120 members (National Front, 107 seats; Istiqlal party, 11; others, 2); House of Representatives, 144 members (National Front, 69 seats; Istiqlal party, 41; National Union, 28; Independents, o).
Religious Faiths: Muslims, 95% (est.) of population; Roman Catholics, 3%; Jews, 2%.
Education: *Literacy rate* (1960)—14% of population aged 15 and over. *Total school enrollment* (1962)—1,138,830 (primary, 1,017,268; secondary, 93,545; teacher-training, 2,470; technical, 20,091; higher, 5,456).
Finance (1964 budget): *Revenues,* $433,000,000; *expenditures,* $433,000,000; *public debt* (1962), $32,000,000; *monetary unit,* dirham (5.06 dirhams equal U.S.$1).
Gross National Product (1964): $2,462,000,000.
National Income (1964): $2,180,000,000; average annual income per person, $168.
Economic Indexes (1964): *Mining production,* 122 (1958=100); *agricultural production,* 119 (1956–57=100); *cost of living,* 125 (1958=100).
Manufacturing (metric tons, 1964): Cement, 828,000; wine, 220,000; gasoline (1963), 166,000; olive oil, 20,000.
Crops (metric tons, 1964–65 crop year): Barley, 1,230,000 (ranks 15th among world producers); citrus fruits, 489,000 (rank, 9th); grapes, 364,000; wheat, 1,270,000.
Minerals (metric tons, 1964): Phosphate rock, 10,097,000 (ranks 3rd among world producers); anthracite coal, 400,000 (rank, 16th); manganese, 341,077 (rank, 8th).
Foreign Trade (1964): *Exports,* $434,000,000 (chief exports: phosphates, $110,700,000; oranges, $48,000,000; manganese, $10,300,000); *imports,* $459,000,000 (chief imports, 1963: sugar, $38,000,000; automobiles, $14,600,000; wood and timber, $13,000,000). *Chief trading partners* (1963): France (took 41% of exports, supplied 43% of imports); West Germany (took 8% of exports, supplied 6% of imports); U.S. (took 1% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 32,180 miles (11,203 paved); *motor vehicles* (1964), 227,450 (automobiles, 150,450); *railways* (1963), 1,305 miles; *merchant vessels* (1964), 13 (50,000 gross registered tons); *airline,* Royal Air Maroc; *principal airports,* Casablanca-Arfa, Casablanca-Nouaceur.
Communications: *Telephones* (1964), 141,335; *television stations* (1964), 4; *television sets* (1964), 15,000; *radios* (1963), 615,000; *newspapers* (1963), 10.

EUROPE
ASIA
AFRICA

A.F.P. FROM PICTORIAL PARADE

MOROCCAN STUDENTS riot in Casablanca on March 23, 1965, because of resentment over government policy. During the rioting, 25 persons were killed and hundreds injured.

ployed adults. On the third day the Moroccan Workers Union (Union Marocaine du Travail) called a general strike, which virtually paralyzed Casablanca, in sympathy with the students. There were also sympathy demonstrations in Fez and Rabat during the three-day period.

During the riots the government instituted newspaper censorship, imposed a curfew from 9:00 P.M. to 6:00 A.M., and seized several left-wing newspapers. In the wake of the riots, the government announced that 481 persons had been arrested, including some Iraqi teachers, and had been sentenced to prison terms ranging from two weeks to two years. The government refused to submit to parliamentary demands for an investigation of the riots.

Government. After several months of fruitless discussion and bargaining with the major parties, King Hassan II decided to take over the conduct of government himself in June 1965. The five major political parties, the National Union of Popular Forces (UNFP), the Istiqlal, the Democratic Socialists, the National Front (FDIC), and the Popular Movement, were unable to reach agreement on the three-year economic plan. They had made demands for changes in the plan and for changes in the balance of political power that the king found unacceptable.

Since the formation of the Bahnini cabinet in November 1963 the role of the parties has been confused. The traditionally nationalist party, the Istiqlal party, has remained in opposition, approving the existing constitution but demanding greater delegation of power to the cabinet and the assembly.

The UNFP, which has been the chief opposition on the left, improved its relations with the king in 1965, but could find no grounds to justify its reentry into the cabinet. In a conciliatory move in July, King Hassan reprieved the death sentences of three UNFP leaders implicated in a plot to assassinate him in 1963. One of the five, Mehdi Ben Barka, was kidnapped in Paris on Oct. 29, 1965, by French counterespionage agents, allegedly under orders from Moroccan Interior Minister Gen. Mohammed Oufkir, who reportedly wanted to keep Ben Barka from returning to Morocco.

The Democratic Socialist Party (PSD), led by one-time prime minister Reda Ahmed Guedira, continued to give full support to the constitution, but was torn by internal rivalries. King Hassan dropped Guedira from the cabinet, leaving only Bahnini and Youssef Ben Abbès as representatives of the party in the cabinet. Later in the year both Bahnini and Ben Abbès resigned from the PSD because of differences on party unity.

Although he lacked party support, King Hassan pressed policies he hoped would help Morocco define her political identity. The monarchist group controlling the National Assembly passed a law forbidding the foreign-owned press in Morocco. The Ministry of Justice determined that all legal and judicial institutions must operate in Arabic. The decision had the effect of eliminating business for the large number of French lawyers and judges who work in Morocco.

Foreign Relations. Morocco's chief aims in international affairs were to raise funds for economic reconstruction and to improve relations with the Arab states. France continued to give about $20 million in assistance, and the United States about $10 million.

Although 14 Algerians connected with a 1963 plot to assassinate King Hassan were executed in 1965, relations with Algeria improved after the more moderate Col. Houari Boumedienne took over the government in Algiers in June 1965. King Hassan maintained good relations with Tunisia, although Tunisian President Habib Bourguiba refused to attend the Arab League conference in Casablanca in September 1965. Hassan also restored *de facto* relations with Mauritania in 1965.

Economy. In September 1965 the Moroccan government announced that the remaining 2 million acres of privately owned French land would be nationalized. About 500,000 acres of land owned by Frenchmen had been recovered in 1964.

Morocco's serious payments imbalance stemmed from the absence of any effective control on trade. To remedy that situation King Hassan decided in July 1965 to nationalize all foreign commerce, even though one of his strongest supporters, Mohammed Laghzaoui, resigned in protest.

The government's budget deficit in 1964 was about $200 million. Drastic efforts were made to reduce government spending in 1965 by 10% from the 1964 figure.

The three-year economic plan that began in 1965 gave agriculture a major role. Completion of the plan's goals will be hindered by the fact that the government has only about $100 million of the roughly $600 million in foreign investment that will be necessary to carry out some projects.

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MOSLEMS. See RELIGION—*Islam.*

MOTELS. See HOTELS AND MOTELS.

MOTION PICTURES

20TH CENTURY-FOX

FAMILY PICTURE OF THE YEAR, *The Sound of Music,* based on Rodgers and Hammerstein's stage musical, stars Academy Award-winning actress, Julie Andrews.

MOTION PICTURES

The general run of 1965 films reflected traditional audience tastes. But because of his cinematic techniques, 1965 might well be remembered as the year of Richard Lester, a young American director working primarily in Britain. Two of his films, together with works by such directors as Sidney Lumet, Federico Fellini, and Jacques Demy, lent an experimental flavor to the year.

The Work of Richard Lester. Lester surprised everybody in 1964 with a nimble and nonsensical chase picture about and with the Beatles—*A Hard Day's Night*. In 1965 he led Britain's most famous singing group through an adventure called *Help!* In this film, Ringo Starr was pursued by vaguely Asian fanatics intent upon offering him up as a burnt sacrifice. Again United Artists, the producer of *Help!*, was able to chalk up astonishing grosses from a low-budget picture—and to receive some favorable reviews as well.

Lester then loosed upon the public a free filmic rendering of *The Knack*, a stage play. He stopped the story for split-second encounters with surveyors, shopkeepers, and sneering adult bystanders; he packed a staircase with implacable furniture; he sent his youngsters through traffic carrying a bedstead. The style was fresh; the audience was pulled along at a pellmell pace.

Other Comedies. It was japes like these, rather than heavy intercontinental comedies such as *The Great Race* and the nostalgic and more successful *Those Magnificent Men in Their Flying Machines,* that pleased alert young audiences in a time when the world's population is increasingly youthful.

The Hallelujah Trail offered a western story with comic overtones within the enormous framework of Cinerama. But more in tune with the times was *Cat Ballou,* a wild and woolly spoof of western heroics, with some fast-motion sequences thrown in for good measure. *The Loved One* was evidently intended by its director, Tony Richardson, as a successor to his earlier award-winner, *Tom Jones,* a fastmoving period comedy. Many critics found it tasteless, however—not because Evelyn Waugh's novel made fun of funeral directors, but because the film missed the real spirit of Waugh's satire.

Serious Drama. Serious and symbolic pictures from Hollywood in 1965 seemed determined to give the impression that all men are trapped in one way or another. In Stanley Kramer's *Ship of Fools,* based on Katherine Anne Porter's best-selling book, a boatload of people were trapped by their ideologies and stupidities. The film was both a critical and popular success. In William Wyler's *The Collector,* a girl was imprisoned in a cellar by a youth who hoped to make her love him. Arthur Penn's heavily symbolic *Mickey One* told of a night club entertainer's vain attempt to elude his enemies and to escape from his past. In Richard Quine's *Synanon,* a group of stock characters were gathered together in their effort to withdraw from the drug habit.

The special internal anguish of *Lord Jim,* as conceived by Joseph Conrad in his classic novel, was echoed by those critics who felt that Richard Brooks should not have tried to make a movie of the book. Critics also complained that George Stevens' production of *The Greatest Story Ever Told* lacked interest despite its photographic beauty and fidelity to the Gospels. Another important novel to become a motion picture in 1965 was *Dr. Zhivago,* by the Nobel prize-winner Boris Pasternak. It won general critical approval as directed by David Lean.

Sidney Lumet made a major bid for attention in 1965 with two films. *The Hill* dealt with unnecessary brutality in a military prison. *The Pawnbroker* concerned a German Jew who, having survived the death camp of Auschwitz, was determined to spend the rest of his life doing nothing more than survive. Both showed Lumet's desire to use a symbolic style to come to grips with serious issues, but both were flawed by melodramatic excesses. *The Pawnbroker* made use of special editing techniques, including flashbacks that were little more than flashes.

Michael Roemer, a new young director, garnered critical praise for using the simplest possible style. His *Nothing But a Man*, technically a 1964 film but not seen generally until 1965, was a straightforward study of a Negro couple striving for identity and economic independence in a Southern town. It was his first feature picture and reflected his conviction (set forth in an article in *Film Quarterly*) that the art of the film must begin with "the surfaces of

BLACK STAR

JULIE ANDREWS, after creating the role of Eliza Doolittle in *My Fair Lady* on Broadway in 1956 and playing it for more than three years in New York and London, lost the part in the film to Audrey Hepburn. With *My Fair Lady* taking most of the year's major awards, her winning the 1964 Academy Award for best actress for her performance as the nursemaid in *Mary Poppins* was slightly ironical.

Julie Andrews, who is married to costume designer Tony Walton, was born in London, England, on Oct. 1, 1935. At the age of 12 she made her stage debut at the London Hippodrome in a program of operatic arias. She played in children's pantomime for several years, then, in 1954, made her first New York appearance as Polly in *The Boy Friend,* a witty lampoon of the musical comedies of the 1920's. After her successful run in *My Fair Lady,* she opened in New York in 1960 in another musical, *Camelot.* Her other films include *The Americanization of Emily* (1963) and *The Sound of Music (1965).*

reality." Roemer also was a co-producer of the film.

From Canada, a country new to feature picture production, came a story of juvenile delinquency, *Nobody Waved Goodbye.* From Hollywood came a realistic drama of social complexities, *A Patch of Blue,* which probed the relationship of a blind white girl and a Negro. And from Britain came the sequel to the 1959 success *Room at the Top,* James Woolf's production of *Life at the Top.*

Action Films. Meanwhile, traditional films continued to be made. An unusual number of them focused on war or the threat of war. They included *The Bedford Incident, In Harm's Way,* and *Battle of the Bulge. King Rat* was set in a prison camp. *The Train* concerned a cargo of French paintings on a train commandeered by a German general, but redelivered to France by the Free French underground forces. *Von Ryan's Express* was about a trainload of war prisoners in Italy.

Other action pictures included *Young Cassidy, The Sons of Katie Elder, Major Dundee,* and *The Cincinnati Kid.* There were sagas of the Middle Ages like *Genghis Khan* and *The War Lord.* Serge Bourguignon went to Hollywood from France; his first picture was *The Reward,* a western. Germany's Bernhard Wicki made a Hollywood film, *Morituri,* which won a bigger audience after its title was changed to *The Saboteur.* From Germany also came *Apache Gold,* the first of a series of German-made westerns based on the character known to European readers as Old Shatterhand.

Spy thrillers seemed to have a special fascination in the mid-1960's. The most successful were the Ian Fleming stories about James Bond—*Goldfinger,* released by Anglo-American producers late in 1964; a double bill of *Dr. No* and *From Russia With Love,* both re-released in 1965; and *Thunderball,* released late in 1965. In these consciously elaborate spy thrillers, the sex was cool, the action was hot, and the gadgetry was the heart of the fun, as audiences waited confidently for one more thing to blow up. In the same tradition but in a loftier style were another British thriller, *The Ipcress File,* and an American film of John Le Carré's bestselling novel, *The Spy Who Came In From the Cold,* directed by Martin Ritt.

Sex and Suspense. Two of Hollywood's traditionally popular themes, the good-bad girl and the semitragic romanticism of illicit love, found expression in the screen's new freedom to talk about sex. *The Sandpiper,* a vehicle for Richard Burton and Elizabeth Taylor, told the tale of a minister attracted by an amoral woman. In *The Yellow Rolls-Royce* various seductions took place in the back seat of an automobile with the shades pulled down. Two producers made competing films based on the life of Jean Harlow, MGM's platinum blonde sex symbol of the 1930's.

The suspense tradition was upheld satisfactorily by *The Satan Bug, Mirage, Return from the Ashes,* and *Bunny Lake is Missing.* A new genre of semihorror pictures, many of them starring Bette Davis, continued the box office success of *Whatever Happened to Baby Jane?* They included *Hush . . . Hush*

OUTSTANDING DRAMATIC FILMS OF 1965 include (left to right) *Ship of Fools,* with Vivian Leigh and Lee Marvin; *The Pawnbroker,* with Rod Steiger (right); and *A Thousand Clowns,* with Barbara Harris and Jason Robards, Jr.

COLUMBIA PICTURES CORP. THE LANDAU COMPANY PICTORIAL PARADE

PICTORIAL PARADE

COMEDY-SPECTACULAR, *Those Magnificent Men In Their Flying Machines,* with Terry-Thomas (shown) and large international cast, is gentle satire on early days of aviation.

Sweet Charlotte and *The Nanny.*

Other American Films. Entertainment suitable for the entire family was provided by *The Sound of Music,* based on the Broadway musical about the Trapp family singers in Europe, and Walt Disney's *That Darn Cat,* starring Hayley Mills. Other producers offered *Clarence the Cross-Eyed Lion, Billie,* and *A Boy Ten Feet Tall. A High Wind in Jamaica* closely followed the celebrated novel by Richard Hughes. For teenagers, there was Frankie Avalon in *Ski Party* and in a series of beach pictures.

Low-budget independent productions, with few exceptions, did not win high marks. Notable attempts were *The Wild Seed,* a "young director" experiment at Universal; *Goldstein,* made by a Chicago avant-garde group; and *Harvey Middleman, Fireman,* the first feature of a cartoon producer, Ernest Pintoff.

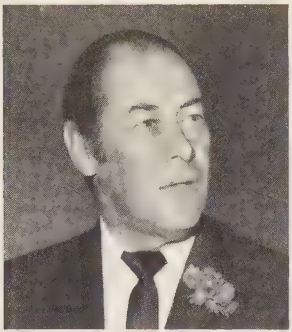
Documentaries. Documentaries, as usual, came from unexpected quarters. *The Bus,* the personal report of an accomplished cameraman, Haskell Wexler, was about a San Francisco group of civil rights marchers-on-Washington. *Dead Birds* was a compassionate study of war and mythology in New Guinea by a Harvard anthropologist and film maker, Robert Gardner. *Chronicle of a Summer,* a French report on viewpoints of the man in the street, reached the United States after five years. *China!* was a bland survey by a British reporter of social and economic change behind the bamboo curtain. *To Die in Madrid* offered a bitter memory of the Spanish Civil War. *The Story of Eleanor Roosevelt* was written by poet Archibald MacLeish.

NOVELS FILMED IN 1965 are (left to right) *The Collector,* with Samantha Eggar and Terence Stamp; *The Agony and the Ecstasy,* with Charlton Heston as Michelangelo; and *Doctor Zhivago,* with Geraldine Chaplin and Omar Sharif.

COLUMBIA PICTURES CORP.

PICTORIAL PARADE

METRO—GOLDWYN—MAYER



KEYSTONE

REX HARRISON, winner of the 1964 Academy Award for best actor for his portrayal of Henry Higgins in *My Fair Lady*, revealed that he was not only the year's best actor but also its most gracious diplomat. On hand for the awards were both Audrey Hepburn, his co-star in the *My Fair Lady* film, and Julie Andrews, his co-star in the original stage version of *My Fair Lady*. Said Harrison as he received the award: "Deep love to—well, two fair ladies, I think."

He was born in Huyton, Lancashire, England, on March 5, 1908. The actor made his stage debut in 1924 in Liverpool, his first film in Britain in 1929, his first London stage appearance in 1930, and his New York debut in 1936. He appeared in many British and American films, including *Blithe Spirit* (1944), *The Rake's Progress* (1945), *The Reluctant Debutante* (1958), and *Cleopatra* (1962). His many stage appearances include *Anne of the Thousand Days* (1948), *The Cocktail Party* (1950), *Bell, Book and Candle* (1951), and, of course, *My Fair Lady* (1956).

European Films. European directors offered fewer contributions in 1965 than is usual. Michelangelo Antonioni was praised for his first color film, *Red Desert*. It again demonstrated Antonioni's preference for milieu over plot. In *Juliet of the Spirits*, Federico Fellini also made his first use of color. Like his larger achievement, *8½*, it was full of introspective flashbacks and inventive techniques.

From Roman Polanski, Polish director of *Knife in the Water*, came *Repulsion*, a grim study of a girl obsessed with the fear of sex. From others came cases of complete commitment to sex: Jean-Luc Godard's *The Married Woman* (France) and John Schlesinger's *Darling* (Britain). The latter won the New York film critics prize for the best picture of the year.

France produced two films of unusual beauty and freshness. *The Umbrellas of Cherbourg*, directed by Jacques Demy and released late in 1964, was a simple tale of separated lovers who finally settle down with more humdrum mates; its dialogue was entirely in song. *Life Upside Down*, a poignant story of a young man who is satisfied to descend into the security of insanity, was executed with astonishing skill by Alain Jessua, a newcomer to feature films.

Censorship. The U.S. Supreme Court made film censorship more difficult than ever in a precedent-making decision. Striking down a specific Maryland law, the court said that a state may require a movie to be censored before exhibition in a theater. But if this is done, there must be "procedural safeguards," including "a prompt final judicial decision" that the censoring agency itself must seek in the courts. The Maryland Legislature immediately created a faster-moving censorship system.

In the state of New York, a Danish movie called *A Stranger Knocks* was the subject of a similar case. Here the U.S. Supreme Court's decision not only released the film from censorship but led the state's Court of Appeals to declare New York's 43-year-old film licensing authority invalid. Another furore was created by *491*, a Swedish film seized by the U.S. Customs as obscene matter. In this instance, a federal court upheld the Customs Bureau's confiscation of the film from its distributor.

Economics. Financially, it was a good year for picture makers. Profits continued at high levels for major production companies. New theaters were beginning to be built. National General Corporation, the parent company for Fox theaters in the West and Midwest, announced plans to build 100 new theaters throughout the country, including some in suburban shopping centers. Loew's Theaters planned an equal expansion.

New Film Institute. From the White House came announcement that the federal arts and humanities program would include an American film institute. Its outlines and functions were to be defined during the coming year by a committee that included Gregory Peck, George Stevens, Sr., Elizabeth Ashley, and William Pereira.

Richard Dyer MacCann
Author of "Hollywood in Transition" and "Film and Society"

NOTABLE PERSONALITIES OF 1965 are (l. to r.) Julie Christie, shown with Laurence Harvey in *Darling;* Richard Burton, who plays title role in *The Spy Who Came In From the Cold;* and Sean Connery, hero of James Bond series.

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OUTSTANDING MOTION PICTURES OF 1965

The following list of films released in the United States in 1965 presents a cross section of the world's best, most typical, most popular, and most widely discussed motion pictures.

The Agony and the Ecstasy (20th Century-Fox). Producer-director, Carol Reed; screenplay, Philip Dunne, based on Irving Stone's novel. With Charlton Heston, Rex Harrison, Diane Cilento, Harry Andrews.

The Amorous Adventures of Moll Flanders (Paramount). Producer, Marcel Hellman; director, Terence Young; screenplay, Denis Cannan and Roland Kibbee, based on Daniel Defoe's novel. With Kim Novak, Lilli Palmer, Richard Johnson, Angela Lansbury, Vittorio De Sica.

Apache Gold (Columbia). Producer, Horst Wendlandt; director, Harold Reinl; screenplay, H.G. Petersson, from a novel by Karl May. With Lex Barker, Pierre Brice, Mario Adorf.

The Art of Love (Universal). Producer, Ross Hunter; director, Norman Jewison; screenplay, Carl Reiner, based on a story by Richard Alan Simmons. With James Garner, Dick Van Dyke, Elke Sommer, Angie Dickinson, Ethel Merman.

The Battle of the Bulge (Warners). Producers, Milton Sperling and Philip Yordan; director, Ken Annakin. With Henry Fonda, Robert Shaw, Robert Ryan, Dana Andrews.

Beach Blanket Bingo (American International). Producers, James Nicholson and Samuel Z. Arkoff; director, William Asher. With Frankie Avalon, Annette Funicello.

The Bedford Incident (Columbia). Producers, James B. Harris and Richard Widmark; director, James B. Harris; screenplay, James Poe, based on a novel by Mark Rascovich. With Richard Widmark, Sidney Poitier, James MacArthur, Wally Cox.

Billie (United Artists). Producer-director, Don Weis; screenplay, Ronald Alexander, based on his play *Time Out for Ginger*. With Patty Duke, Jim Backus, Jane Greer, Billy De Wolfe.

Boeing Boeing (Paramount). Producer, Hal Wallis; director, John Rich; screenplay, Edward Anhalt, based on Marc Camoletti's play. With Tony Curtis, Jerry Lewis.

A Boy Ten Feet Tall (Paramount-Seven Arts-Bryanston). Producer, Hal Mason; director, Alexander Mackendrick. With Edward G. Robinson, Fergus McClelland, Constance Cummings.

Buddha (Lopert). Producer, Masaichi Nagata; director, Kenji Misumi. With Kojiro Hongo, Charito Solis, Shintaro Kutsu.

Bunny Lake Is Missing (Columbia). Producer-director, Otto Preminger; screenplay, John and Penelope Mortimer, based on the novel by Evelyn Piper. With Carol Lynley, Keir Dullea, Laurence Olivier, Noel Coward.

The Bus (Harrison). Producer-director, Haskell Wexler. A documentary about a bus trip from San Francisco to the civil rights march on Washington.

Casanova '70 (Embassy). Producers, Joseph E. Levine and Carlo Ponti; director, Mario Monicelli. With Marcello Mastroianni, Virna Lisi, Michele Mercier, Marisa Mell.

Cat Ballou (Columbia). Producer, Harold Hecht; director, Elliot Silverstein; screenplay, Walter Newman and Frank R. Pierson, based on the novel by Roy Chanslor. With Jane Fonda, Lee Marvin, Michael Callan, Dwayne Hickman.

China! (Felix Greene). Producer-writer, Felix Greene; narration, Alexander Scourby. A documentary film on everyday life in Communist China.

Chronicle of a Summer (Pathe-Contemporary). Producers, Anatole Dauman and Philippe Lipchitz; directors, Jean Rouch and Edgar Morin. A documentary about the people of France and their attitudes toward life.

The Cincinnati Kid (MGM). Producer, Martin Ransohoff; director, Norman Jewison; screenplay, Ring Lardner, Jr., and Terry Southern, based on novel by Richard Jessup. With Steve McQueen, Edward G. Robinson, Ann-Margret, Karl Malden, Tuesday Weld, Rip Torn.

Clarence, the Cross-Eyed Lion (MGM). Producer, Ivan Tors; director, Andrew Marton. With Marshall Thompson, Betsy Drake, Richard Haydn.

The Collector (Columbia). Producers, Jud Kinberg and John Kohn; director, William Wyler; screenplay, Stanley Mann and John Kohn, based on the novel by John Fowles. With Terence Stamp, Samantha Eggar, Maurice Dallimore, Mona Washbourne.

Darling (Embassy). Producer, Joseph Janni; director, John Schlesinger. With Julie Christie, Dirk Bogarde, Lawrence Harvey, Ronald Curram.

Dead Birds (Peabody Museum of Harvard). Producer-director, Robert Gardner; written by Peter Matthiessen. Documentary on daily life of a New Guinea tribe.

Dear Brigitte (20th Century-Fox). Producer-director, Henry Koster; screenplay, Hal Kanter, based on John Hoase's novel. With James Stewart, Fabian, Glynis Johns.

Dear Heart (Warners). Producer, Martin Manulis; director, Delbert Mann; story and screenplay, Tad Mosel. With Glenn Ford, Geraldine Page, Angela Lansbury, Michael Anderson, Jr.

Die, Die, My Darling (Columbia). Producer, Hammer Films; director, Silvio Narizzano; screenplay, Richard Matheson, based on Anne Blaisdell's novel, *Nightmare*. With Tallulah Bankhead, Stephanie Powers, Peter Vaughan.

Do Not Disturb (20th Century-Fox). Producers, Aaron Rosenberg and Martin Melcher; director, Ralph Levy; screenplay, Milt Rosen and Richard Breen, based on William Fairchild's play. With Doris Day, Rod Taylor, Hermione Baddeley, Reginald Gardiner.

Dr. Zhivago (MGM). Producer, Carlo Ponti; director, David Lean; screenplay, Robert Bolt, based on the novel by Boris Pasternak. With Geraldine Chaplin, Julie Christie, Tom Courtenay, Alec Guinness, Siobhan McKenna, Ralph Richardson, Omar Sharif, Rod Steiger, Rita Tushingham.

The Eleanor Roosevelt Story (Landau-Unger-Allied Artists). Producer, Sidney Glazier; director, Richard Kaplan; written by Archibald MacLeish; narration by Eric Sevareid, Archibald MacLeish, Mrs. Francis Cole.

The Face of Fu Manchu (Seven Arts). Producer, Oliver Unger; director, Don Sharp; screenplay, Peter Welbeck, based on a character by Sax Rohmer. With Christopher Lee, Nigel Green, Karin Dor, James Robertson Justice.

The Family Jewels (Paramount). Producer-director, Jerry Lewis. With Jerry Lewis, Sebastian Cabot, Donna Butterworth.

Fanny Hill: The Memoirs of a Woman of Pleasure (Favorite Films). Producer, Albert Zugsmith; director, Russ Meyer; screenplay, Robert Hill, based on a novel by John Cleland. With Miriam Hopkins, Letitia Roman, Walter Giller, Alex D'Arcy.

The Fascist (Embassy). Producers, Isidoro Broggi and Renato Libassi; director, Luciano Salce. With Ugo Tognazzi, Georges Wilson.

Genghis Khan (Columbia). Producer, Irving Allen; director, Henry Levin. With Stephen Boyd, Omar Sharif, James Mason, Eli Wallach.

Girl Happy (MGM). Producer, Joe Pasternak; director, Boris Sagal. With Elvis Presley, Shelley Fabares, Gary Crosby.

The Glory Guys (United Artists). Producers, Arnold Laven, Arthur Gardner, and Jules Levy; director, Arnold Laven; screenplay, Sam Peckinpah, based on Hoffman Birney's novel *The Dice of God*. With Tom Tryon, Harve Presnell, Senta Berger.

Goldstein (Altura Films International). Producer, Zev Braun; writer-directors, Philip Kaufman and Benjamin Manaster. With Lou Gilbert, Ellen Madison, Thomas Erhart, Benito Carruthers.

The Greatest Story Ever Told (United Artists). Producer-director, George Stevens. With Max von Sydow, Dorothy McGuire, Robert Loggia, Claude Rains, José Ferrer.

The Great Race (Warners). Producer, Martin Jurow; director, Blake Edwards. With Jack Lemmon, Tony Curtis, Natalie Wood, Peter Falk, Keenan Wynn.

The Great Spy Mission [former title, **Operation Crossbow**] (MGM). Producer, Carlo Ponti; director, Michael Anderson. With Sophia Loren, George Peppard, Trevor Howard, John Mills, Tom Courtenay.

The Hallelujah Trail (United Artists). Producer-director, John Sturges; screenplay, John Gay, based on a novel by Bill Gulick. With Burt Lancaster, Lee Remick, Jim Hutton, Pamela Tiffin.

Harlow (Magna-Electronovision). Producers, Bill Sargent and Lee Savin; director, Alex Segal. With Carol Lynley, Efrem Zimbalist, Jr., Ginger Rogers, Barry Sullivan.

Harlow (Paramount). Producer, Joseph E. Levine; director, Gordon Douglas; screenplay, John Michael Hayes, based on a book by Irving Shulman in collaboration with Arthur Landau. With Carroll Baker, Martin Balsam, Red Buttons, Michael Connors, Peter Lawford.

Harvey Middleman, Fireman (Columbia). Producers, Robert L. Lawrence and Ernest Pintoff; director-writer, Ernest Pintoff. With Hermione Gingold, Gene Troobnick, Arlene Golonka, Patricia Harty.

Help! (United Artists). Producer, Walter Shenson; director, Richard Lester. With the Beatles (John Lennon, Paul McCartney, Ringo Starr, George Harrison), Leo McKern, Eleanor Bron.

A High Wind In Jamaica (20th Century-Fox). Producer, John Croydon; director, Alexander Mackendrick; screenplay, Ronald Harwood, Denis Cannan, and Stanley Mann, based on Richard Hughes' book. With Anthony Quinn, James Coburn, Dennis Price, Gert Frobe.

The Hill (MGM). Producer, Kenneth Hyman; director, Sidney Lumet. With Sean Connery, Harry Andrews, Ian Bannen, Alfred Lynch.

How To Murder Your Wife (United Artists). Producer-writer, George Axelrod; director, Richard Quine. With Jack Lemmon, Virna Lisi, Terry-Thomas, Eddie Mayehoff, Claire Trevor.

How To Stuff a Wild Bikini (American International). Producers, James H. Nicholson and Samuel Z. Arkoff; director, William Asher. With Annette Funicello, Dwayne Hickman, Brian Donlevy, Harvey Lembeck.

Hush . . . Hush Sweet Charlotte (20th Century-Fox). Producer-director, Robert Aldrich. With Bette Davis, Olivia de Havilland, Joseph Cotten, Agnes Moorehead.

I'll Take Sweden (United Artists). Producer, Edward Small; director, Frederick De Cordova. With Bob Hope, Tuesday Weld, Frankie Avalon, Dina Merrill, Jeremy Slate.

In Harm's Way (Paramount). Producer-director, Otto Preminger; screenplay, Wendell Mayes, from book by James Bassett. With John Wayne, Kirk Douglas, Patricia Neal, Tom Tryon, Paula Prentiss, Brandon DeWilde.

The Ipcress File (Universal). Producer, Harry Saltzman; director, Sidney J. Furie; screenplay, Bill Canaway and James Doran, from Len Deighton's novel. With Michael Caine, Nigel Green, Guy Doleman, Sue Lloyd, Gordon Jackson.

John Goldfarb, Please Come Home (20th Century-Fox). Producer, Steve Parker; director, J. Lee Thompson. With Shirley MacLaine, Peter Ustinov, Richard Crenna.

Joy In the Morning (MGM). Producer, Henry T. Weinstein; director, Alex Segal; screenplay, Sally Benson, Alfred Hayes, and Norman Lessing, based on Betty Smith's novel. With Richard Chamberlain, Yvette Mimieux, Arthur Kennedy, Oscar Homolka.

OUTSTANDING MOTION PICTURES OF 1965 (Cont.)

Juliet of the Spirits (Rizzoli). Producer-director, Federico Fellini. With Giulietta Masina, Sandra Milo, Sylva Koscina.

King Rat (Columbia). Producer, James Woolf; director, Bryan Forbes; screenplay, Bryan Forbes, based on a novel by James Clavell. With George Segal, Tom Courtenay, James Fox, Patrick O'Neal.

The Knack . . . and How to Get It (Woodfall-Lopert). Producer, Oscar Lowenstein; director, Richard Lester; screenplay, Charles Wood, based on play by Ann Jellicoe. With Rita Tushingham, Ray Brooks, Michael Crawford, Donal Donnelly.

La Bohème (Warner Brothers). Producer, Herbert von Karajan; director, Franco Zeffirelli; opera by Giacomo Puccini. With Gianni Raimondi, Mirella Freni, Rolando Paneria, Gianni Maffeo, Ivo Vinco.

Laurel & Hardy's Laughing '20's (MGM). Producer-writer, Robert Youngson. With Stan Laurel, Oliver Hardy, Charley Chase, and others. A compilation film.

The Leather Boys (RLP). Producer, Raymond Stross; director, Sidney J. Furie; screenplay, Gillian Freeman, from Elliot George's novel. With Rita Tushingham, Dudley Sutton, Colin Campbell.

Life at the Top (Royal Films). Producer, James Woolf; director, Ted Kotcheff; screenplay, Mordecai Richler, from John Braine's novel. With Laurence Harvey and Jean Simmons.

Life Upside Down (Landau). Producer, Michel Peynet; director-writer, Alain Jessua. With Charles Denner, Anna Gaylor.

Lord Jim (Columbia). Producer-director-writer, Richard Brooks; adapted from Joseph Conrad's novel. With Peter O'Toole, James Mason, Curt Jurgens, Jack Hawkins, Eli Wallach.

Love and Kisses (Universal). Producer-director-writer, Ozzie Nelson. With Rick Nelson, Kristin Nelson, Jack Kelly.

The Love Goddesses (Reade-Sterling). Producer-writers, Saul J. Turell and Graeme Ferguson; narration, Carl King. With Pola Negri, Clara Bow, Mae West, Marilyn Monroe, Brigitte Bardot, and others. A compilation film.

The Loved One (MGM). Producers, Martin Ransohoff, John Calley, and Haskell Wexler; director, Tony Richardson; screenplay, Terry Southern and Christopher Isherwood, based on the novel by Evelyn Waugh. With Robert Morse, Jonathan Winters, Rod Steiger, Anjanette Comer, Dana Andrews, Milton Berle.

Major Dundee (Columbia). Producer, Jerry Bresler; director, Sam Peckinpah. With Charlton Heston, Richard Harris, Jim Hutton.

The Married Woman (Royal Films). Producer-director-writer, Jean-Luc Godard. With Macha Meril, Philippe Leroy, Bernard Noel, Margaret Le-Van.

Mickey One (Columbia). Producer-director, Arthur Penn. With Warren Beatty, Hurd Hatfield, Alexandra Stewart, Franchot Tone, Jeff Corey.

Mister Moses (United Artists). Producer, Frank Ross; director, Ronald Neame; screenplay, Charles Beaumont and Monja Damschewsky, based on Max Catto's novel. With Robert Mitchum, Carroll Baker.

The Moment of Truth (Rizzoli). Producer, Angelo Rizzoli; directors, Francesco Rosi and Antonio Cervi. With Miguel Mateo Miguelin and Linda Christian.

Mondo Pazzo (Rizzoli). Producers, Mario Maffei and Giorgio Cecchini; directors, Gualtiero Jacopetti and Franco Prosperi. A nonfiction film report on strange customs around the world.

The Nanny (20th Century-Fox). Producer, Jimmy Sangster; director, Seth Holt; screenplay, Jimmy Sangster, based on Evelyn Piper's novel. With Bette Davis, William Dix.

Never Too Late (Warners). Producer, Norman Lear; director, Bud Yorkin; screenplay, Sumner Long, based on his play. With Paul Ford, Connie Stevens, Maureen O'Sullivan, Jim Hutton.

Nobody Waved Goodbye (National Film Board of Canada). Producers, Roman Kroitor and Don Owen; director-writer, Don Owen. With Peter Kastner, Julie Biggs, Claude Rae, Charmion King.

None But the Brave (Warner). Producer-director, Frank Sinatra. With Frank Sinatra, Clint Walker, Tommy Sands.

Once a Thief (MGM). Producers, Jacques Bar, Ralph Nelson, and Fred Engel; director, Ralph Nelson. With Alain Delon, Ann-Margret, Van Heflin, Jack Palance.

A Patch of Blue (MGM). Producer, Pandro S. Berman; director, Guy Green. With Sidney Poitier, Elizabeth Hartman, and Shelley Winters.

The Pawnbroker (Landau-Steinman). Producers, Roger H. Lewis and Philip Langner; director, Sidney Lumet; screenplay, David Friedkin and Morton Fine, from a novel by Edward Lewis Wallant. With Rod Steiger, Geraldine Fitzgerald, Brock Peters, Jaime Sanchez, Thelma Oliver.

A Rage to Live (United Artists). Producer, Lewis J. Rachmil; director, Walter Grauman; screenplay, John T. Kelley, based on John O'Hara's novel. With Suzanne Pleshette, Bradford Dillman, Ben Gazzara.

Rapture (International Classics). Producer, Christian Ferry; director, John Guillermin; screenplay, Stanley Mann, from a novel by Phyllis Hastings. With Melvyn Douglas, Dean Stockwell, Patricia Gozzi, Leslie Sands.

Red Desert (Rizzoli). Producer, Antonio Cervi; director, Michelangelo Antonioni. With Monica Vitti, Richard Harris, Carlo Chionette, Xenia Valderi.

Repulsion (Royal International). Producer, Eugene Gutowski; director, Roman Polanski. With Catherine Deneuve, Ian Hendry, John Fraser, Yvonne Furneaux.

Return From the Ashes (United Artists). Producer-director, J. Lee Thompson; screenplay, Julius Epstein, based on a novel by Hubert Monteilhet. With Maximilian Schell, Samantha Eggar, Ingrid Thulin, Herbert Lom.

Rotten To the Core (Cinema V). Producer, Roy Boulting; director, John Boulting. With Anton Rodgers, Eric Sykes, Ian Bannen, Avis Bunnage.

The Saboteur: Code Name Morituri [former title, **Morituri**] (20th Century-Fox). Producer, Aaron Rosenberg; director, Bernhard Wicki. With Marlon Brando, Yul Brynner, Janet Margolin, Trevor Howard.

The Sandpiper (MGM). Producer, Martin Ransohoff; director, Vincente Minnelli. With Elizabeth Taylor, Richard Burton, Eva Marie Saint, Charles Bronson.

The Satan Bug (United Artists). Producer-director, John Sturges; screenplay, James Clavell and Edward Anhalt, based on a novel by Ian Stuart. With George Maharis, Richard Basehart, Anne Francis, Dana Andrews.

She (MGM). Producer, Michael Carreras; director, Robert Day; screenplay, David T. Chantler, based on H. Rider Haggard's novel. With Ursula Andress, Peter Cushing, Barnard Cribbins, John Richardson.

Shenandoah (Universal). Producer, Robert Arthur; director, Andrew V. McLaglen. With James Stewart, Doug McClure, Glenn Corbett, Patrick Wayne.

Ship of Fools (Columbia). Producer-director, Stanley Kramer; screenplay, Abby Mann, from Katherine Anne Porter's novel. With Vivian Leigh, Simone Signoret, José Ferrer, Lee Marvin, Oskar Werner, Michael Dunn.

Situation Hopeless—But Not Serious (Paramount). Producer-director, Gottfried Reinhardt. With Alec Guinness, Michael Connors, Robert Redford, Anita Hoefer.

The Slender Thread (Paramount). Producer, Stephen Alexander; director, Sydney Pollack. With Anne Bancroft, Sidney Poitier.

The Sons of Katie Elder (Paramount). Producer, Hal Wallis; director, Henry Hathaway. With John Wayne, Dean Martin, Martha Hyer, Earl Holliman, Michael Anderson, Jr.

The Sound of Music (20th Century-Fox). Producer-director, Robert Wise; screenplay, Ernest Lehman; from the stage musical by Rodgers & Hammerstein, book by Howard Lindsay and Russel Crouse. With Julie Andrews, Christopher Plummer, Eleanor Parker, Richard Haydn, Peggy Wood.

The Spy Who Came In From the Cold (Paramount). Producer-director, Martin Ritt; screenplay, Paul Dehn and Guy Trosper, based on John Le Carré's novel. With Richard Burton, Claire Bloom, Oskar Werner.

A Stranger Knocks (Trans-Lux; Flamingo Film Studio). Producer-director, Johan Jacobsen. With Birgitte Federspiel, Preben Lerdorff Rye.

The 10th Victim (Embassy). Producer, Joseph E. Levine; director, Elio Petri. With Marcello Mastroianni, Ursula Andress.

That Darn Cat (Buena Vista). Producers, Bill Walsh and Ron Miller; director, Robert Stevenson. With Hayley Mills, Dean Jones, Dorothy Provine, Roddy McDowall, Elsa Lanchester.

36 Hours (MGM). Producers, William Perlberg and George Seaton; director-writer, George Seaton. With James Garner, Rod Taylor, Eva Marie Saint, Werner Peters.

Those Magnificent Men In Their Flying Machines (20th Century-Fox). Producer, Stan Margulies; director, Ken Annakin. With Stuart Whitman, Sarah Miles, James Fox, Alberto Sordi, Terry-Thomas.

A Thousand Clowns (United Artists). Producer-director, Fred Coe; screenplay, Herb Gardner, based on his play of the same name. With Jason Robards and Barbara Harris.

Thunderball (United Artists). Producer, Kevin McClory; director, Terence Young; screenplay, Richard Maibaum and John Hopkins, based on Ian Fleming's novel. With Sean Connery, Claudine Auger.

To Die In Madrid (Altura Films International). Producers, Clem Perry and Frederic Rossit; narration by Sir John Gielgud, Irene Worth. Documentary about Spanish Civil War.

The Train (United Artists). Producer, Jules Bricken; director, John Frankenheimer. With Burt Lancaster, Paul Scofield, Jeanne Moreau.

Up From the Beach (20th Century-Fox). Producer, Christian Ferry; director, Robert Parrish; screenplay, Howard Clewes, based on George Barr's novel *Epitaph For An Enemy*. With Cliff Robertson, Red Buttons, Irina Demick, Broderick Crawford.

Viva Maria (United Artists). Producers, Oscar Dancigers and Louis Malle; director, Louis Malle. With Brigitte Bardot, Jeanne Moreau.

Von Ryan's Express (20th Century-Fox). Producer, Saul David; director, Mark Robson; screenplay, Wendell Mayes and Joseph Landon, based on a novel by David Westheimer. With Frank Sinatra, Trevor Howard, Brad Dexter.

The War Lord (Universal). Producer, Walter Seltzer; director, Franklin Schaffner; screenplay, John Collier and Millard Kaufman, based on Leslie Stevens' play *The Lovers*. With Charlton Heston, Richard Boone, Maurice Evans.

What's New, Pussycat? (United Artists). Producer, Charles K. Feldman; director, Clive Donner. With Peter Sellers, Peter O'Toole, Romy Schneider, Capucine, Woody Allen.

The Wild Seed (Universal). Producer, Albert S. Ruddy; director, Brian G. Hutton. With Michael Parks, Celia Kaye, Ross Elliott, Woodrow Chambliss.

The Yellow Rolls-Royce (MGM). Producer, Anatole De Grunwald; director, Anthony Asquith. With Rex Harrison, Jeanne Moreau, George C. Scott, Shirley MacLaine, Art Carney, Ingrid Bergman, Omar Sharif.

Young Cassidy (MGM). Producers, Robert D. Graff and Robert Emmett Ginna; director, Jack Cardiff; screenplay, John Whiting, based on Sean O'Casey's *Mirror in My House*. With Rod Taylor, Edith Evans, Michael Redgrave.

MOTOR TRANSPORTATION

Most kinds of truck transportation in the United States continued to expand during 1965, thereby contributing to the general improvement in the nation's economy. In the field of bus transport, travel volumes in 1965 remained relatively unchanged from their 1964 levels.

Trucking. The U.S. motortruck fleet in 1965 expanded by 600,000 vehicles over the previous year. Registration, excluding government-owned trucks, reached an all-time high of 13,900,000. The industry carried over 400 million ton-miles of freight in 1965—an increase for the tenth consecutive year.

Total operating revenues for the 16,000 for-hire truck lines engaged in U.S. interstate commerce rose to about $10 billion. This figure was more than $500 million above the annual freight revenues of all U.S. railroads. Private and for-hire trucking operators not regulated by the Interstate Commerce Commission earned additional billions of shipping dollars.

The trucking industry's impact on the economy was reflected in several ways. Trucks used more than 19.1 billion gallons of motor fuel in 1965, and the trucking industry spent more than $7.2 billion in new equipment, parts, and accessories. The industry also provided employment for more than 8 million persons and had a payroll totaling more than $50 billion.

In 1965, motortrucks paid an estimated $4 billion in federal, state, and local highway use taxes, including tax levies budgeted for construction of the Interstate Defense Highway System. This figure represents about one third of total highway taxes, although trucks account for only 15.5% of all registered motor vehicles.

Bus Operations. The travel volume of intercity and local and suburban bus systems remained relatively unchanged between 1964 and 1965. However, according to the National Association of Motor Bus Owners and the American Transit Association, an increase was recorded in school bus service, which carried 14.9 million pupils daily at public expense during the 1963–64 school year. Chartered and special bus service, particularly express-package transportation, also increased in 1965.

During the past several years, the number of registered buses in the United States has increased from 2 to 4% annually, largely as a result of increases in the number of school buses. In 1964, more than 305,000 buses were registered, according to the Bureau of Public Roads of the U.S. Department of Commerce.

In 1965, a volume increase in long-distance, through-bus service on new highways and turnpikes was offset by losses in travel on short trips, where automobile competition is heavy. Intercity bus travel was expected to total just under 23 billion passenger-miles in 1965, or slightly more than in 1964. Among local and suburban bus lines, rides were provided in 1965 for more than 4.5 billion revenue passengers.

William A. Bresnahan
Managing Director
American Trucking Associations, Inc.

MOTORBOAT RACING. See Sports.

MOUNTAIN CLIMBING. See Geography and Exploration.

MOZAMBIQUE. See Portugal.

MUNICIPAL PLANNING. See City Planning.

CBS NEWS

EDWARD R. MURROW, American journalist, shown here reporting the Korean War, died in Pawling, N.Y., April 27.

MURROW, Edward Roscoe

U.S. radio and television reporter: b. near Greensboro, N.C., April 25, 1908; d. Pawling, N.Y., April 27, 1965.

Edward R. Murrow's uncompromising integrity won for him the largest audience that any news commentator has ever commanded. Darkly handsome, with a sombre voice of memorable timbre, he possessed an idealism, honesty, and manner of quiet understatement that inspired a generation of young American journalists. His spirit was always in harmony with his simple American origins, and he refused to compromise in his search for the truth, either as a broadcaster to the people of the United States, or in government service, when he told America's story to the world. "America's goal is its dreams," he once said, "and the truth shall be our guide."

Early Life. Christened Egbert Roscoe Murrow, he was the son of a North Carolina tenant farmer. As a boy, he moved with his family to Blanchard, Wash. He studied speech at the State College of Washington (now Washington State University), and was elected to Phi Beta Kappa. During summer vacations, he worked on a timber gang in the Northwest, an experience that overlaid his natural Southern courtliness with a warm Western sense of humor that he often used in times of stress. While in College, he changed his first name to Edward.

Murrow's ability to write and analyze came naturally, and he received no formal training as a journalist. First inclined to education, he became president of the National Student Federation after graduation, and then assistant director of the Institute of International Education. In 1932, while traveling by train to an educational convention, he met Janet Huntington Brewster, a Mount Holyoke graduate. They were married two years later.

Reporter in Europe. In 1935 the Columbia Broadcasting System (CBS) hired Murrow as director of talks and education. He was attending a meeting in New Orleans in 1937 when CBS called to ask if he would go to Europe. His affirmative reply was the turning point in his career. In March 1938, he was in Warsaw arranging a cultural broadcast when German troops marched into Austria. He chartered a plane for $1,000, and arrived in Vienna in time to broadcast to the United States a description of the

CBS NEWS

"PERSON TO PERSON" TV program allowed Murrow, in the studio, to visit celebrities at home by remote pickup.

Germans goose-stepping down the Kärntnerstrasse.

When World War II seemed inevitable, Murrow set up headquarters in London as CBS European news chief. "This . . . is London" were the opening words of his memorable broadcasts, which conveyed to millions of American listeners the moods and feelings of Britons under fire during Nazi air raids on London. Murrow usually took the most risky assignments, and flew a dozen missions during the war. His son, Casey, was born in London at the end of the war.

Postwar Career. Murrow was appointed CBS vice president in charge of news operations in 1946. But 18 months later he returned to the microphones as a commentator. His evening news report began with a grave "This . . . is the news," and ended with a crisp "Good night, and good luck!"

Murrow turned to television in 1951, and his weekly program *See It Now* ran for seven years. In 1954 he challenged the views of Senator Joseph R. McCarthy, Republican of Wisconsin, in a television study of the phenomenon known as "McCarthyism." Murrow showed another side of his personality in an interview program called *Person to Person*, in which he visited the homes of celebrities by a two-way television hookup. While traveling abroad, he participated in conversations with world leaders for another television program called *Small World*.

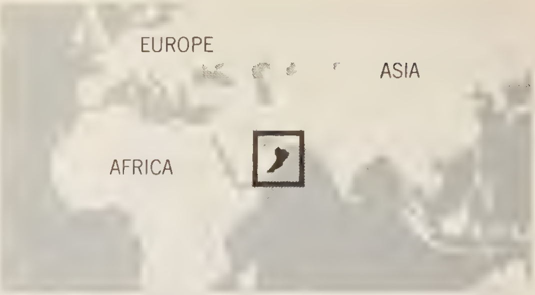
Murrow's high-domed head, wrinkled brow, and constantly smoking cigarette became as familiar on television as his baritone voice had been on the radio. He won virtually all the radio and television awards offered in the news field, including four Peabody awards for excellence in broadcasting.

In 1961, President Kennedy named Murrow director of the United States Information Agency. Murrow later described his Washington career as the most satisfying period of his life. He believed that the best propaganda for the United States was to tell the candid truth in perspective.

Murrow underwent surgery in October 1963, and after a two-year battle, he died of lung cancer. President Johnson called him "a gallant fighter, a man who dedicated his life both as a newsman and as a public official to the unrelenting search for truth."

Larry LeSueur
Voice of America, U.S. Information Agency

MUSCAT AND OMAN



The independent sultanate of Muscat and Oman occupies almost the entire Arabian coast (known as the Batinah) of the Gulf of Oman, the peninsula of Rus al-Jibal at the entrance to the Persian Gulf, the eastern half of the Arabian coast (mainly in the region of Dhufar) on the Arabian Sea, and territory of undetermined extent in the interior (to which the name Oman is properly restricted). Oman is separated from the Batinah by the Hajar Mountains. The area under the sultan's control is estimated at slightly over 80,000 square miles, and the population at under 600,000. The capital is Muscat (est. pop., 6,000), but the main commercial center is nearby Matrah (est. pop., 14,000).

Government. Sa'id ibn Taymur (acceded 1932) governs the sultanate, which has been recognized as an independent state by Great Britain, the United States, and India. The earliest U.S. treaty in the Middle East was concluded in 1833 with the sultan of Muscat, who then also ruled Zanzibar. The sultan's closest ties, however, are with Britain, and British civilians and officers hold influential positions in the government and armed forces.

Political Disputes. The sultan's claim to the interior is disputed by Imam Ghalib ibn 'Ali, a theocratic leader (elected in 1953) whose predecessors had ruled Oman after 1913. In 1959 the sultan's forces under British officers drove the imam out of Oman. Setting up a government-in-exile, the imam has pressed his case as rightful ruler before the United Nations and in other international forums. The Arab states generally support the imam, while Britain is the sultan's chief defender. The discovery of oil under the sultan's auspices strengthened his grip on the disputed territory.

The Buraimi Oasis in the interior, claimed by Saudi Arabia and in part by Muscat and Oman, was divided in 1956, under British superintendence, between the sultanate and the Trucial State of Abu Dhabi.

Economy. The economy of Muscat and Oman has until recently been based almost entirely on agriculture, stock raising (especially camels), and fishing, with modest exports of dates, fruits, and fish. In 1963, oil was discovered in promising quantities in Oman by Petroleum Development (Oman) Ltd., originally a subsidiary of the Iraq Petroleum Company but owned jointly since 1960 by Shell Petroleum Ltd. and the Gulbenkian petroleum interests. In 1964, Shell announced plans for investing about $70 million to exploit the new discovery. Steps were taken in 1965 to build a pipeline from Oman across the Hajar Mountains to the Batinah coast near Matrah. The exploitation of oil resources should accelerate economic development of the sultanate.

George Rentz
Curator, Middle East Collection
Hoover Institution, Stanford University

MUSIC

THE NEW YORK TIMES

PIANIST VLADIMIR HOROWITZ receives a standing ovation at New York City's Carnegie Hall on May 9, 1965, following his first concert in 12 years.

MUSIC

Highlights of the 1964–65 music season included pianist Vladimir Horowitz's return to the concert stage after 12 years of virtual retirement, and the end of the concert career of the great American contralto Marian Anderson. Maria Callas returned to the Metropolitan Opera for a brief engagement, and there were several noteworthy operatic debuts. The national company of the Metropolitan Opera began operations in September.

There was evidence of financial difficulty in the operation of some American symphony orchestras. The Chicago and New Orleans symphonies cancelled their seasons before arriving at satisfactory contracts and agreeing to resume operations. The general trend, however, continued to be toward longer seasons, higher pay, and more summer activity.

Financial aid during the year came from the Rockefeller Foundation, which provided for an additional week of performances by the resident orchestras of at least nine cities. In October the Ford Foundation announced the allocation of $85 million for the use of orchestras throughout the country. Finally, the newly established National Council on the Arts approved the expenditure of $3 million to be used in 1966 "for the support and development of the creative and performing arts." A portion of the amount was designated for the commissioning of 25 new works for symphony orchestras, and for as many as 50 grants to composers.

Concert Artists. Probably the most dramatic musical event of the 1965 season was the triumphant return to the concert stage of the pianist Vladimir Horowitz. After 12 years of self-imposed retirement from the rigors and tensions of concert playing, Horowitz on May 9 gave a recital in Carnegie Hall. Even before he had played a note, the audience accorded the 60-year-old virtuoso a standing ovation, and after he had played his final encore they refused to leave the concert hall until the house lights had been turned on, the stage lights turned off, and the piano shut.

Carnegie Hall was also the scene of the finale of the 30-year career of the great American contralto Marian Anderson. In April she ended a long farewell tour that had begun in October 1964. Except for an occasional guest appearance, the 63-year-old singer planned to do no more concertizing.

As the first Negro singer to gain universal acceptance as a "serious" musician, she cleared the way for others of her race. As the first Negro ever to sing at the Metropolitan Opera (1955) she made it possible for other fine Negro singers to perform there and in other U.S. opera houses. Her retirement marked the end of an epoch in American music.

Orchestras in the United States. Most American symphony orchestras carried forward vigorous programs in 1965. The New York Philharmonic closed the 1964–65 winter season under a variety of guest conductors while Leonard Bernstein was on sabbatical leave. It performed a Bruckner cycle in a series of concerts spaced throughout the winter, and then undertook a busy summer schedule. In June it gave the third annual Promenade series at Philharmonic Hall under the general direction of André Kostelanetz, with Sir Malcolm Sargent conducting a Romantic Promenade and a Viennese evening, and Franz Allers leading an all-Offenbach program.

In July, Lukas Foss served as artistic director for a French-American Festival. Charles Munch conducted the music of Berlioz, Poulenc, and Ravel in several all-French programs, and Leonard Bernstein interrupted his leave to conduct three of his own scores, one of which was the world premiere of the *Chichester Psalms*. Other composers on the podium included Darius Milhaud and Aaron Copland.

In August the Philharmonic moved outdoors, presenting free concerts in the public parks of New York City for three weeks. These concerts were financed in part by the city ($175,000), in part by the orchestra ($50,000), and in part by the Schlitz Brewing Company ($50,000). Audience attendance and enthusiasm were overwhelming.

In October, Bernstein returned to the podium to begin a two-year survey of 20th century symphonic literature, to include, in honor of the Jean Sibelius centennial, all of the Sibelius symphonies. At the midway point of the first season, however, critics and audiences were lukewarm in their response.

The Chicago Symphony celebrated its 75th anniversary in the 1965–66 season by commissioning two works: one by the American composer Gunther Schuller and the other by the orchestra's own conductor, French-born Jean Martinon. The latter's *Symphonie Altitudes* received its first performance in December. The Chicago Symphony presented two other world premieres, both works of Igor Stravinsky: *Variations* and *Introitus: T.S. Eliot in Memoriam.* Robert Craft, with the composer present, conducted the two works on April 17.

Leopold Stokowski excited the music world by presenting at Carnegie Hall on April 26 his own American Symphony Orchestra in the world premiere of the Fourth Symphony of the American composer Charles Ives (1874–1954). It had taken Stokowski roughly 10 years to piece together the various parts of the score. Many extra rehearsals and the help of two assistant conductors were required to perform this difficult work. The Rockefeller Foundation financed the project with a grant of $7,200.

Another reconstruction of widespread interest was Mahler's 10th Symphony, performed by the Philadelphia Orchestra under Eugene Ormandy. An English musicologist, Deryck Cooke, completed the score, which was generally considered excellent. A version by Joseph Wheeler had been given some months earlier by a semiprofessional ensemble in New York.

At Tanglewood, Mass., the summer home of the Boston Symphony, the orchestra under Erich Leinsdorf made musical history in August when it presented in concert form the first uncut *Lohengrin* to be heard in the United States. Tenor Sandor Konya sang the leading role.

European orchestras visiting the United States in 1965 included the Berlin Philharmonic under Herbert von Karajan, which played a five-concert Beethoven cycle at Carnegie Hall in New York City at the end of January. The BBC Symphony under the joint leadership of Antal Dorati and Pierre Boulez presented six concerts of 20th century music in Carnegie Hall in May, Boulez making his American debut. Also making its first trip to the United States was the Moscow Philharmonic, which toured the Eastern states in October and presented 11 concerts at Carnegie Hall. 2Kiril Kondrashin was the Moscow group's principal conductor; violinist David Oistrakh doubled as conductor on two occasions and Evgeni Svetlanov appeared as guest conductor twice. Soloists with the orchestra were violinists Igor and David Oistrakh; cellist Mstislav Rostropovich and his wife, soprano Galina Vishnevskaya; and pianist Van Cliburn. The entire series drew solidly packed houses; critical evaluation was warm but not ecstatic.

Opera in the United States. At the Metropolitan Opera, the 1964–65 season ended somewhat uncertainly. The first *Aïda* of the season had Leontyne Price in the leading role and was the occasion for William Steinberg's debut as a Metropolitan Opera conductor. However, neither performer was a complete success. Balancing this was the spectacular performance by Birgit Nilsson in the title role in her first New York *Salome*. Other highlights were Régine Crespin's first *Tosca* at the Metropolitan; Maria Callas' much publicized return to the Metropolitan on March 10 after an absence of several seasons—also in Puccini's *Tosca;* and Crespin's first performance in New York as Sieglinde in Wagner's *Die Walküre*. Among other successful new productions was Saint-Saëns' *Samson et Dalila,* with Jess Thomas and Rita Gorr in the leading roles, and Georges Prêtre conducting.

For the first time in its history, the Metropolitan Opera took over the summer concerts at Lewisohn Stadium in New York City. Renata Tebaldi opened the series on June 21 with a program of arias. Later, the complete *La Traviata,* by Verdi, was presented in concert form, starring Anna Moffo. A high point of the series was Regina Resnik's performance of the title role in *Carmen,* which she had never sung during the regular Metropolitan season.

For its 1965–66 season—the final one in the house on 39th Street (before moving into its new quarters in Lincoln Center)—the Metropolitan scheduled only two new productions: Gounod's *Faust,* directed by the great French actor Jean-Louis Barrault; and

WIDE WORLD

MARIA CALLAS takes a bow with Tito Gobbi (l.) and Franco Corelli after her triumphant return to the Metropolitan Opera in New York on March 19 in the title role of *Tosca*. The fiery soprano was dismissed from the Metropolitan in 1958 in a dispute over her singing dates.

Tchaikovsky's *The Queen of Spades,* given in English. In *Faust,* basso Cesare Siepi was outstanding as Mephistopheles; in *The Queen of Spades,* Teresa Stratas, Jon Vickers, and Regina Resnik received special praise.

Among those making auspicious fall debuts at the Metropolitan were Mirella Freni as Mimi in *La Bohème,* Renata Scotto as Cio-Cio-San in *Madama Butterfly,* and Grace Bumbry as Princess Eboli in *Don Carlo.* In November the much-heralded Bulgarian basso Nicolai Ghiaurov made his debut in *Faust.*

Perhaps the biggest operatic event of the year was the fall tour of the Metropolitan National Touring Company. After a summer's rehearsal, the unit, which was formed in 1964 and is headed by Risë Stevens and Michaël Manuel, opened in Indianapolis on September 20, and then began a tour of virtually the entire United States. Four operas made up the company's first year's repertoire—Carlisle Floyd's *Susannah,* Rossini's *La Cenerentola* (in English), Bizet's *Carmen* (in English and French), and Puccini's *Madama Butterfly* (in English and Italian). The singers, most of them young and relatively unknown, were chosen for their talent and promise.

At the New York City center, world premieres in the spring and fall of 1965 included Jack Beeson's *Lizzie Borden* and Ned Rorem's *Miss Julie.* Operas having their first American or New York productions were Shostakovich's *Katerina Ismailova* (revised version) and Prokofiev's *Flaming Angel.* The Juilliard Opera Theater mounted the first American production of *Elegy for Young Lovers,* by the contemporary German composer, Hans Werner Henze.

Operatic milestones elsewhere in the United States included Kansas City's production in May of Handel's *Julius Caesar,* in which Evelyn Lear, an American soprano who has sung almost exclusively in Europe, made her first U.S. operatic appearance; Santa Fe's summer premieres of Henze's *The Stag King,* with George Shirley, and Shostakovich's *The Nose,* with John Reardon; San Francisco's West Coast premiere of Alban Berg's *Lulu,* with Evelyn Lear impressive in the lead; Dallas' production of *La Traviata,* in which the Spanish soprano Montserrat Caballé made her first appearance in a complete opera in the United States; and the Boston Opera Company's *Boris Godunov,* given in Musorgski's own scoring of 1869, with George London as Boris.

In Canada, the North American premiere of Kurt Weill and Bertolt Brecht's *The Rise and Fall of the City of Mahagonny* was given at Stratford, Ont., on July 2, as part of the program at the Shakespeare Festival.

Opera in concert form continued to flourish. In addition to Tanglewood's *Lohengrin,* there were the American premieres of Busoni's *Dr. Faustus* and Handel's *Alcina* with Joan Sutherland, presented by the American Opera Society; Donizetti's *Maria Stuarda* and Berlioz' *Benvenuto Cellini* by the Concert Opera Association; and Donizetti's *Lucrezia Borgia,* another production of the American Opera Society, with the Spanish soprano Montserrat Caballé making her first concert appearance in America.

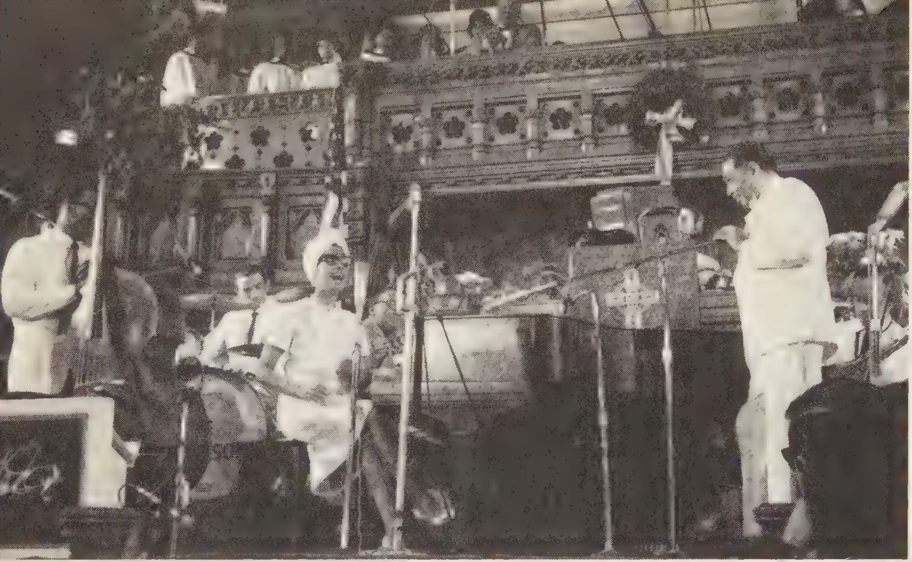
Europe. In Britain, the celebration of Michael Tippett's 60th birthday resulted in frequent performances of his works. A broadcast of his first opera, *Midsummer Marriage,* received warm response. The high point of the season at the Royal Opera House, Covent Garden, was the first performance outside Germany of Arnold Schönberg's *Moses and Aaron,* featuring its much-publicized orgy scene. Other events at the Royal Opera House included the premiere in February of Richard Rodney Bennett's opera *The Mines of Sulphur,* which had been commissioned by the Sadler's Wells Company; and the first performance outside Russia of Prokofiev's *Flaming Angel,* which was given in New York later.

Maria Callas added to her legend. Scheduled to sing several performances of *Tosca,* she made a single appearance before Queen Elizabeth II on July 5, then cancelled the remainder of her engagement. Marie Collier successfully substituted for her. The Russian cellist Mstislav Rostropovich gave a record-breaking performance of 31 concertos in nine consecutive concerts with the London Symphony. Of major importance was the appointment of Istvan Kertesz as permanent conductor of the London Symphony Orchestra. Outside London, the most interesting events were perhaps those at the Aldeburgh Festival, where three new works of Benjamin Britten were premiered. The Glyndebourne Festival, despite a production of *Der Rosenkavalier* starring Montserrat Caballé as the Marschallin, was considered a fairly dull affair.

In Paris, the season was enlivened by riots at the performance on February 2 of *Stratégies,* a work by

LOUIS MÉLANÇON

FINAL "MET" SEASON at old opera house opened on Sept. 27, 1965, with a new production of Gounod's *Faust,* starring (l. to r.) Gabriella Tucci, Nicolai Gedda, Cesare Siepi, and Gladys Kriese. The Metropolitan company is scheduled to move to its new home in New York's Lincoln Center for 1966–67 season.



CONCERT IN CHURCH, conducted by composer Duke Ellington and featuring singer Lena Horne, is presented on Dec. 26, 1965, at New York's Fifth Avenue Presbyterian Church. The "concert of sacred music" included both jazz and traditional spirituals.

UPI

avant-gardist Yannis Xenakis. The International Rostrum of Composers, meeting in Paris on May 31–June 4, heard 80 new compositions.

In Berlin, Walter Felsenstein's production of Benjamin Britten's *Midsummer Night's Dream* at the Komische Oper proved captivating, but the real high point of the spring season was the world premiere on April 7 of Hans Werner Henze's *The Young Lord,* at the Deutsche Oper. In August the 35-year-old American conductor Lorin Maazel took over as chief conductor of the Berlin Radio Symphony Orchestra and as music director of the Deutsche Oper. The Berlin Festival, held later in the fall, gave him his first opportunity to prove himself in his new position. At the Munich Festival (July and August), Rudolf Hartmann staged Richard Strauss' *Intermezzo.*

In Austria, at the Salzburg Festival (July and August), Bulgarian basso Nicolai Ghiaurov sang his first Boris in Musorgski's *Boris Godunov;* Herbert von Karajan was again the conductor. The Vienna Festival produced Sergei Prokofiev's 40-year-old opera *The Flaming Angel,* and Hans Erich Pfitzner's 1917 opera *Palestrina.* George Szell and the Cleveland Orchestra scored a tremendous success at the festival.

The Italian scene had great variety in 1965. In Rome, the RAI (Italian Radio) aired Luigi Nono's *La fabbrica illuminata* for contralto and recorded tape, and Henze's Fifth Symphony. Also in Rome, as elsewhere in Italy, there was a rash of Rossini productions, including *The Barber of Seville* and *Otello.* In Naples, Rossini's *Zelmira* was revived for the first time since the composer's death.

Milan got off to a tempestuous start when La Scala's opening night audience booed a new production of Verdi's *La Traviata,* starring Mirella Freni and directed by Herbert von Karajan, but tempers were smoother by midseason when Rossini's *William Tell* was given for the first time in 25 years. La Scala also presented the world premiere of *Clitennestra* by the 84-year-old Ildebrando Pizzetti on May 23. La Piccola Scala on March 16 produced the world premiere of *Atomtod,* by Giacomo Manzoni.

At Florence's Maggio Musicale (May 11–June 30), Britten's *Billy Budd,* in an Italian translation, was given for the first time in Italy. In June, at Spoleto, a much heralded production of Verdi's *Otello,* under Thomas Schippers' direction, fell short of expectations. The International Festival of Contemporary Music took place in Venice on September 8–15. Goffredo Petrassi's Seventh Concerto for Orchestra was warmly received, and the same concert included the world premiere of Gian Francesco Malipiero's Second Violin Concerto.

Scandinavia boasted at least two outstanding events. The first was Birgit Nilsson's first performance anywhere in Richard Strauss' *Elektra,* with the Royal Swedish Opera in Stockholm. The second was the celebration on May 9–15 of the Carl Nielsen centennial in Copenhagen, where Leonard Bernstein conducted a warmly received performance of Nielsen's Symphony No. 3.

Elsewhere in Europe, the Warsaw Festival encompassed 16 concerts in 10 days (September 21–29). The American-based LaSalle Quartet performed Witold Lutoslawski's First String Quartet to an overflowing house, and the Third Quartet (1924) of Alexander Zemlinsky, the teacher of Schönberg. In Budapest, a new opera by Sandor Szokolay entitled *Blood Wedding* was staged; and in Prague, the 20th "Prague Spring" (May 12–June 4) was highlighted by concerts of the Czech Philharmonic under the Rumanian conductor Sergiu Celibadache, and by performances of cellist Mstislav Rostropovich and his wife, soprano Galina Vishnevskaya. They appeared in separate and in joint recitals, with Rostropovich acting as piano accompanist in the latter.

Moscow's "Russian Winter" festival (December 5–January 5) featured a *Boris Godunov* with Ivan Petrov in the title role, a recital by pianist Sviatoslav Richter, and the world premiere of a work by Dmitri Shostakovich for bass, chorus, and orchestra entitled *The Execution of Stvenka.*

In Amsterdam the first production since 1770 of Haydn's *Le pescatrici* was performed on June 26. Musicologist H.C. Robbins Landon had restored portions of the score.

Australia. Perhaps the most adventurous operatic undertaking of the year was launched in Melbourne on July 10, when Australian soprano Joan Sutherland and her conductor-husband Richard Bonynge arrived with their own grand opera company for a three-month tour. The company mounted seven new productions, including *Semiramide, Lucia di Lammermoor, La Sonnambula,* and *Eugen Onegin.*

(For information on jazz and popular music in 1965, see RECORDINGS.)

SHIRLEY FLEMING
Managing Editor, "Musical America"

MUSLIMS. See RELIGION—*Islam.*

NARCOTICS

In spite of many dramatic arrests and seizures by federal, state, and local law-enforcement authorities in the United States in 1965, the abuse of narcotics and other psychotoxic drugs remained a serious national problem. Two encouraging advances were made during the year. The President's Advisory Commission on Narcotic and Drug Abuse recommended major changes in federal narcotic laws that shifted the emphasis from harsh punishment to rehabilitation. President Johnson asked for and received congressional action to curtail illicit traffic in barbiturates and amphetamines.

President's Advisory Commission. In March, President Johnson told the nation that the President's Advisory Commission on Narcotic and Drug Abuse recommended the enactment of a federal civil commitment statute to allow addicts accused of federal crimes to receive medical treatment instead of imprisonment. He added that illegal sales of psychotoxic drugs must be controlled. (The Food and Drug Administration estimated that half the annual production of these drugs slips into underworld channels.) He urged Congress to enact legislation to help drug abusers. At the same time, he warned that such legislation must assure protection to the general public.

The final report of the advisory commission contained 25 recommendations for legislative and administrative action. It covered illicit traffic in drugs, research into drug dependence, education of public and professional groups, and treatment and rehabilitation of the addict. On July 15, 1965, President Johnson signed into law the Drug Abuse Control Act of 1965, the first legislation to come out of the commission's recommendations.

Rehabilitation. One outstanding congressional proposal exhibited a new and enlightened federal approach to those dependent on drugs, as well as to the means of combating the criminal elements involved. This was the Narcotic Addict Rehabilitation Bill, which, if enacted into law, would permit convicted addicts considered capable of rehabilitation to receive institutional and outpatient treatment instead of a prison sentence. It would allow certain addicts facing criminal prosecution to choose civil commitment and treatment instead of facing trial. It also would ease some mandatory sentencing laws that do not permit parole, and permit more flexible treatment of youthful offenders.

International Control. The 18th World Health Assembly in Geneva recognized the fact that national efforts are not sufficient to control the use of harmful drugs. On May 20, 1965, a resolution was introduced to study the feasibility of international controls over sedatives and stimulants. Other organizations involved with the international aspects of this problem were the World Health Organization's Committee on Dependence Producing Drugs, the UN Commission on Narcotic Drugs, and the International Criminal Police Organization.

DEAN FERRIS MARKHAM
Special White House Consultant and Executive Director, President's Advisory Commission on Narcotic and Drug Abuse

NASSER, Gamal Abdel. See UNITED ARAB REPUBLIC.

NATIONAL ACADEMIES AND ASSOCIATIONS. See SOCIETIES AND ORGANIZATIONS.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. See SPACE EXPLORATION.

NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards (NBS) of the Department of Commerce conducts a broad range of research, development, and technical service programs in the physical and engineering sciences. The purpose of these programs is to advance U.S. industrial and economic growth through the application of science and technology.

The bureau's primary work in 1965 again was concentrated on the development and improvement of standards and techniques for physical measurement. Activities in related fields included developing automatic data-processing techniques, studying radio-wave propagation, and disseminating technical information.

Measurement Methods. A significant advance in low-temperature thermometry was achieved in 1965. A new absolute temperature scale, based on the acoustical thermometer, was established for temperatures between 4° K and 14° K (−269° C and −259° C). This new scale bridges the gap between the upper limit (5° K) defined by the T_{58} helium-4 vapor-pressure scale, and the lower limit (10° K) defined by the NBS 1955 provisional scale.

The NBS used a helium-neon laser as an interferometric light source to measure the length of a meter bar. This was the first time that the laser was used successfully to measure the length of materials. The bar length was measured to an accuracy better than one part in 10 million.

Multimillion-dollar savings in the U.S. space program were made possible by the installation of three large deadweight machines that have capacities up to 1 million pounds. These machines greatly increased the bureau's capability for precise calibration of large force-measuring devices, such as those used to measure rocket-engine thrusts.

The atomic weights of silver, chlorine, bromine, and copper were redetermined to a high precision by means of mass spectrometry. This physical technique provides a valuable check on chemical methods used to determine atomic weights. The value obtained for bromine was the only one that differed significantly from the accepted value.

Ultrapure Materials. A technique was developed to purify materials to degrees of ultrapurity never before obtained. A device is used to purify the material by melting and recrystallizing it. A single stage of purification reduces the amount of impurity in a material by a factor of 1,000. The purification device can be used to produce high-purity reference standards to evaluate industrial materials.

Data-Processing Programs. The NBS was given the responsibility to operate a central governmental data-processing facility. This facility will develop standards for automatic computers and provide technical support for other government agencies in solving data-processing problems.

To aid the Office of Emergency Planning in evaluating conditions during a national emergency, NBS developed a data-processing system called the Automatic Computer-Controlled Electronic Scanning System (ACCESS). ACCESS is a forward step in communication between man and computers. It will receive and process data from local and remote sources, and present its output in a form that is immediately intelligible to a human operator.

A.V. ASTIN
Director, National Bureau of Standards

NATIONAL DEBT. See BUDGET, U.S.

UNITED PRESS INTERNATIONAL PHOTO

DEFENSE HEADQUARTERS of North American Defense Command has new bombproof cave under 1,000 feet of granite in Cheyenne Mountain, close to Colorado Springs, Colo. First units moved in during 1965 as construction neared completion. While tunneling continues, workmen (foreground) use hot-air hose to remove moisture before pouring concrete for tunnel floor.

NATIONAL DEFENSE

The most dramatic development in the area of national defense during 1965 was the increased involvement of the U.S. military forces in the war in Vietnam. A steady escalation of the war continued throughout the year. By December, U.S. bombers were carrying out almost daily raids against military targets and strategically important installations in North Vietnam, and American ground forces were engaged in bloody pitched battles with determined Vietcong rebels, who were supported by North Vietnamese troops. The Johnson administration's aim was to force the Communists to the negotiating table by means of military pressure. Bombing was suspended from Dec. 24, 1965, through Jan. 30, 1966, during a massive American effort to achieve peace.

Despite the step-up in the Vietnam fighting and the looming danger of war with Communist China, no major change was made during 1965 in the overall structure and complements of U.S. military forces. Changes made or projected in nuclear forces generally followed plans laid down in previous years. The defense budget for fiscal year 1966 showed only a small rise, but the 1967 budget was much higher.

Nuclear Armaments. The policy regarding nuclear weapons continued to be guided by two major objectives: (1) deterring a possible Communist attack on the United States or its allies by maintaining a capacity for "assured destruction" of the enemy country; and (2) limiting the damage to the U.S. economy and population in the event of a nuclear war by counterforce strikes at enemy nuclear forces and by air defense and civil defense measures.

Changes in missile capability and deployment reflected a continuing implementation of decisions made earlier as to the force required to meet the policy objectives, as well as the normal phasing-out and replacement of obsolescent weapons. By June 30, 1965, the last of 800 solid-fuel Minuteman 1 missiles were installed in underground silos and made operational. In addition, some 200 of the improved Minuteman 2 missiles were being installed as part of the planned 1,000 Minuteman 2 missiles regarded as the ultimate requirement. The administration apparently was holding to its earlier judgment that the bomber will play only a marginal role in nuclear strategy after the early 1970's.

Strength of the Armed Forces. Because of the prospect of prolonged and probably increasing involvement in the Vietnam fighting, the Army's 16 divisions were being brought to full combat strength, and a recommended 17th division was in the process of formation at the end of 1965. Draft calls increased steadily during the latter months of the year, possibly presaging more dramatic increases during 1966. A "select force" of Army reserves and National Guard units—more than three divisions—was being brought to combat readiness. Also, the three Marine divisions were being strengthened and a reserve Marine division, possibly slated for active duty, was in the process of reorganization.

At the end of the year, two Army divisions, two Army brigades, and a Marine division were on combat duty in South Vietnam. In addition, the Army had five divisions and one regiment serving with NATO forces in Germany, two divisions in South Korea, half a division on police duty in the Dominican Republic, and somewhat less than one division in Hawaii. The Army's remaining 5½ divisions were stationed in the United States as a strategic reserve.

The Army's Special Forces—troops highly trained in counterguerrilla tactics—were increased from three to seven groups during the year, obviously as the result of increased requirements for the war in Vietnam. Army and Marine forces were given greater mobility and flexibility through new equipment and new tactics—a trend dramatically illustrated by the use of helicopters as short-range transport vehicles in South Vietnam. (See ARMY.)

Little change occurred in non-nuclear naval forces during the year. These forces consisted of 865 ships of various types, deployed in four fleets in the Atlantic, Mediterranean, Eastern Pacific, and Western Pacific. A nuclear-powered task force, consisting of an aircraft carrier, a guided-missile cruiser, and two guided-missile frigates, was transferred in October from the Atlantic to the Pacific as part of the Seventh Fleet, which has operated in Far Eastern seas since World War II. This fleet was heavily involved in tactical and logistic support of Army and Marine forces in South Vietnam. (See NAVY).

The Air Force's non-nuclear forces in 1965 consisted primarily of the Tactical Air Command and the Military Airlift Command. The former consisted of 130 squadrons based in the United States, Europe, and the Pacific, with special task forces operating in Formosa and Vietnam. The Military Airlift Command, which was known as the Military Air Transport Service until Congress changed its name in May (see AIR FORCE), operated about 1,000 aircraft in 37 squadrons.

Plans announced in January 1966 called for increasing the total manpower strength of the armed forces to about 3,030,000 men by mid-1966, compared with 2,681,000 at mid-1965. Most of the increase would go toward strengthening Army and Marine units. (See MARINE CORPS.)

The War in Vietnam. Participation by the United States in the Vietnamese war increased sharply during the year, beginning in February with the bombing of military and transportation targets in North Vietnam. This step had been advocated for some time by many Americans.

As the attacks increased in intensity during the year, they were justified by the administration as a means of physically reducing the flow of supplies and manpower to the Communist rebels in the south and as a means of persuading the North Vietnamese leaders to accept a negotiated settlement by demonstrating to Hanoi the high cost of continuing the fight. Gradually the raids were extended to nearly all of North Vietnam and included occasional strikes at industrial facilities near the cities of Hanoi and Haiphong. The Ho Chi Minh Trail in Laos, along which most of the supplies to the southern rebels were moving, also came under heavy air attack.

To meet the guerrilla tactics in South Vietnam, the United States escalated its role in the war step by step, from advising the South Vietnamese army, to establishing more U.S. air and naval bases, to actively protecting these bases, and, finally, to launching major combat offensives against Vietcong forces. The number of U.S. ground forces in South Vietnam jumped from 16,000 in January 1965 to 190,000 as of Jan. 12, 1966, and predictions for future commitments ran as high as 250,000 to 350,000 men. In support of the increased U.S. ground effort, American jet fighters and bombers, including the giant B-52's, began launching almost daily attacks against Vietcong positions, and the Seventh Fleet began intensive patroling of the Vietnamese coast and participated in the bombing operations.

By the year's end, expanded American operations had succeeded in preventing South Vietnam's collapse, but had failed to force the Communists to negotiate. Bombing of North Vietnam was stopped on President Johnson's orders as of Dec. 24, 1965. He sent diplomats to more than 113 governments to seek channels leading to peace, but this brought only contemptuous rejection from North Vietnam.

The North Vietnamese showed no signs of reducing their infiltration of supplies and men. At least seven North Vietnamese army regiments of 2,000 men each were operating in the south by December, and soldiers from the north continued to infiltrate at an estimated rate of 1,500 per month.

Communist China expanded military and industrial shipments to the Hanoi government, and the Soviet Union also was reported to have increased its military aid. Just as ominous as the communist buildup was a new willingness to stand and fight against superior forces, reversing the tactic of slipping away when outnumbered. (See also FOREIGN POLICY, U.S.)

NATO. During the year, it became apparent that President Charles de Gaulle of France was bent on ending what he called American domination of the North Atlantic Treaty Organization (NATO) as a result of the preeminent U.S. influence in the integrated NATO military force and its command structure. De Gaulle's ultimate aim, it appeared, was to effect the disintegration of the combined forces of the alliance and dissolve its planning and decision-making organs, thus reducing NATO to a traditional military alliance based solely on commitments of mutual aid. To achieve this aim, he threatened, and seemed prepared to carry out, an eventual withdrawal of France from NATO, possibly substituting a series of bilateral pacts with selected countries, but relying heavily on France's own nuclear *force de frappe* as an alternative to American protection.

Not only the "French problem" but also the "German problem" became more acute for NATO during the year. Forbidden by treaty to manufacture her own nuclear weapons, West Germany aimed to achieve greater participation and influence in NATO's nuclear strategy, and a greater share in the physical control of the nuclear weapons provided by the United States. Fearing that frustrating this aim might lead Germany to opt for her own independent nuclear arsenal, the United States earlier had proposed a multilateral force of 25 naval vessels to be armed with nuclear missiles and controlled jointly by NATO members willing to participate. This idea was virtually shelved during 1965, however.

Nevertheless, Germany's insistence on a greater nuclear role continued. In May, probably in part to appease Germany, as well as to placate de Gaulle, the United States proposed the creation of a select committee composed of the United States, Britain, France, West Germany, and perhaps Italy, to study the whole problem of allied participation in nuclear command and control and possibly to act as a kind of board of directors for the alliance on nuclear matters. The suggestion was immediately rejected by de Gaulle and did not seem to provoke more than mild interest among other European statesmen. West Germany's Chancellor Ludwig Erhard visited President Johnson on December 20–21 to request more nuclear weapons for NATO—specifically, 10 Polaris submarines. The president agreed to discuss this further with Germany and other allies. (See also NORTH ATLANTIC TREATY ORGANIZATION.)

Continental Defense. Urgent research and development continued on the Nike-X antiballistic missile system. As designed, it will be a defensive network which combines a warning of incoming offensive missiles with the means of tracking them, discriminating between real warheads and decoys, and intercepting the warheads at a relatively low altitude by extremely fast defensive missiles. The Department of Defense deferred the decision of whether or not to produce the missiles, pending the resolution of technical uncertainties. (See MISSILES.)

As for defense against bomber attack, the primary reliance was upon Nike, Hawk, and Bomarc ground-to-air missiles, plus 38 squadrons of fighter-interceptor aircraft equipped with air-to-air missiles. In general, the number of fighter-interceptors was being reduced in view of the apparent decline of the threat of bomber attack, but qualitative improvements were being made in both the interceptor and missile systems.

The defense of North America is the responsibility of NORAD, a joint Canadian-American com-

WIDE WORLD PHOTOS

DEFENSE DEPARTMENT LEADERS Robert S. McNamara, secretary of defense (l.), and Gen. Earle G. Wheeler, chairman of the Joint Chiefs of Staff, observe launch of air strike against North Vietnam on July 18 from deck of carrier *Independence*.

mand at Ent Air Force Base, Colorado Springs, Colo. A new operations center was approaching completion nearby, deep in Cheyenne Mountain, where some units of the command were installed in 1965.

Defense Budget. The military budget for the fiscal year ending June 30, 1966, was set in January 1965 at $48.8 billion, a slight increase above the $47.2 billion spent in fiscal year 1965. However, it was estimated in December that increased equipment and manpower needs generated by the war in Vietnam would raise the year's spending well above $50 billion. President Johnson requested and was granted $2.7 billion in supplemental appropriations during the summer to finance the build-up in Vietnam. Secretary of Defense McNamara's highly effective cost-reduction program, including the closing of many obsolescent military installations, along with a further tapering-off of the scheduled increase in nuclear missile forces, was expected to offset in part the emergency expenses of the war.

President Johnson on Jan. 12, 1966, requested $58.3 billion for the military budget for fiscal year 1967—about $2 billion less than was anticipated. Much of the increase was attributed to rising personnel costs resulting from the planned increase of 390,000 in manpower plus a rise in military pay.

Administration. In 1965, Robert S. McNamara continued as secretary of defense and Cyrus R. Vance as deputy secretary. Few significant changes occurred among high-ranking civilian and military officials, although a stir was created by the resignation of Rear Admirals William A. Brockett and Charles A. Curtze, chief and deputy chief of the Navy's Bureau of Ships, in protest against what they considered inordinate encroachment by McNamara in the area of professional military decisions.

Gen. Earle G. Wheeler continued to serve as chairman of the joint chiefs of staff, Gen. Harold Johnson as chief of staff of the Army, Adm. David L. McDonald as chief of naval operations, and Gen. Wallace M. Greene as chief of staff of the Marine Corps. Gen. John P. McConnell became chief of staff of the Air Force, replacing Gen. Curtis E. LeMay, who retired in February.

GLENN H. SNYDER
Professor of Political Science
State University of New York at Buffalo

NATIONAL EDUCATION ASSOCIATION. See EDUCATION; SOCIETIES AND ORGANIZATIONS.

NATIONAL FORESTS. See FORESTRY.

NATIONAL GEOGRAPHIC SOCIETY. See GEOGRAPHY.

NATIONAL GUARD

The National Guard, the largest organized ready reserve force in the U.S. military establishment, brought certain of its Air and Army Guard units to a state of increased readiness and manpower in 1965. After Congress refused Secretary of Defense Robert S. McNamara's request to merge the federal Army Reserve into the Army National Guard, Secretary McNamara announced on September 30, and confirmed on November 13, that 751 Army Reserve units, including 6 divisions with 55,000 men, would be abolished, and that the National Guard would be enlarged.

Combat Readiness. The Army National Guard was ordered on September 30 to form immediately a selected reserve force of 119,000 men to be trained and prepared for combat wherever needed. The Army Reserve was to contribute about a sixth of this force, which will comprise three infantry divisions, five separate infantry brigades, a separate mechanized infantry brigade, an armored cavalry regiment, and other combat-support and service units. The select-force members will receive a 50% increase in drill pay, and the force will have priority for equipment and maintenance.

On August 18 the Air National Guard was ordered to man nine tactical fighter groups, four tactical reconnaissance groups, and a tactical control group, and have them ready for combat in early 1966.

Special Services. Several state governors called out National Guard troops in 1965 to handle emergency duties. These duties included service at such disasters as the Los Angeles riots, hurricane Betsy, West Coast and Midwest spring floods, and the electric power blackout in the Northeast.

The Air National Guard significantly increased its passenger and cargo airlift operations with flights that combined training with assistance to the Air Force Military Airlift Command. Air Guardsmen flew 3,900 patients and medical passengers and delivered over 27,500 tons of cargo to overseas areas, including South Vietnam.

Exercises. *Guardlift II* airlifted 30,000 Army Guard and Army Reserve troops to training sites in the southwestern United States, Hawaii, Panama, Europe, and Alaska. Training was conducted in jungle, desert, and Arctic areas to take advantage of climatic and geographic conditions not available in local training situations. Tactical air units made overseas trips that required refueling in flight by Air Guard tankers.

Continental Defense. As integral parts of the North American Air Defense Command, 22 Air Guard fighter groups and 54 Army Guard Nike Hercules missile batteries remained operational in 1965.

Strength. The total assigned strength of the Army National Guard on Oct. 31, 1965, was 34,972 officers and 367,119 enlisted men in 3,998 units, including 17 infantry divisions and 6 armored divisions. The Air National Guard's assigned strength was 10,115 officers and 68,310 airmen in 735 units, organized in 24 wings with 86 groups, 88 flying squadrons, and other units.

MAJ. GEN. WINSTON P. WILSON, USAF
Chief, National Guard Bureau

WILD PONY HERDS roam on Assateague Island (*above*), which was made a national seashore in 1965. Every year in late July, some of the ponies are herded across the channel to Chincoteague Island (*right*) for auction. Assateague is divided between Virginia and Maryland.

U.S. DEPARTMENT OF THE INTERIOR

NATIONAL PARKS

President Johnson's special message to Congress in early 1965 on improving the natural beauty of the United States, and the ensuing White House Conference on Natural Beauty, heightened public interest in the national park system and the great need for more parks, protected seashores, and recreation areas. (See CONSERVATION.)

New Parks. In 1965, Congress authorized the establishment of Assateague Island National Seashore in Maryland and Virginia, thus preserving for public use and enjoyment the largest remaining undeveloped seashore between Cape Cod and Cape Hatteras. Other areas authorized in 1965 included Herbert Hoover National Historic Site, Iowa; Delaware Water Gap National Recreation Area, Pennsylvania-New Jersey; Hubbell Trading Post National Historic Site, Arizona; Agate Fossil Beds National Monument, Nebraska; Nez Perce National Historical Park, Idaho; Alibates Flint Quarries and Texas Panhandle Pueblo Culture National Monument, Texas; Pecos National Monument, New Mexico; Pennsylvania Avenue National Historic Site, Washington, D.C.; and Golden Spike National Historic Site, Utah.

Historic Sites. Under a proclamation issued by President Johnson, Ellis Island, which had been the gateway to the New World for millions of immigrants, was added to the Statue of Liberty National Monument on nearby Liberty Island in New York harbor. More than 50 historic structures and sites throughout the country were declared eligible for designation as registered national historic landmarks by Secretary of the Interior Stewart L. Udall.

Sites declared eligible for the registry of natural landmarks included the San Andreas Fault, California; Summit Lake, Colorado; Battle Creek Cypress Swamp, Maryland; Bear Butte, South Dakota; Odessa Meteor Crater, Texas; Seashore Natural Area, Virginia; Ramsey Canyon, Arizona; Cranesville Swamp Nature Sanctuary, West Virginia-Maryland; Mentor Marsh, Ohio; and Grand Coulee, Washington. These landmarks are not units of the national park system but are recognized by the National Park Service with certificates and plaques.

NATIONAL PARK SERVICE AREAS

Type	Number	Area (Acres)
National parks	32	13,566,495
National seashores	5	76,572
National historical parks	10	32,583
National memorial park	1	68,978
National monuments	77	8,938,766
National battlefield parks	3	5,994
National battlefields	5	2,552
National battlefield sites	3	778
National military parks	11	29,386
National historic sites	22	2,902
National memorials	15	4,801
National capital parks	1	35,150
White House	1	18
National parkways	3	102,860
National cemeteries	10	215
National recreation areas	4	3,234,397
Totals	203	26,102,447

Anniversaries. Ceremonies were held at Appomattox Court House National Historical Park, Virginia, on April 9, 1965, marking the centennial of the surrender of General Lee to General Grant and the end of the Civil War. On July 16, ceremonies marked the 50th anniversary of Rocky Mountain National Park, Colorado.

GEORGE B. HARTZOG, JR.
Director, National Park Service

NATIONAL SECURITY. See NATIONAL DEFENSE.
NATO. See NORTH ATLANTIC TREATY ORGANIZATION.
NAURU. See COMMONWEALTH OF NATIONS.

NAVY

Combat operations in Vietnam overshadowed other United States naval activities during 1965, but equally significant was the deployment to the West Pacific of a squadron of nuclear-powered submarines armed with 2,500-mile-range Polaris A-3 missiles. Although the war in Vietnam drew heavily on the Navy's resources of ships, planes, and men, the service continued to carry out cold war and peacetime duties around the world.

The War in Vietnam. Direct naval action in South Vietnam began with the accidental discovery, late in February, of a North Vietnamese steamer unloading ammunition in Vung Ro Bay, one of the numerous harbors on Vietnam's long, mountainous, indented coast. The incident revealed a fact that U.S. intelligence sources had failed to discover—that major support for Vietcong guerrillas in South Vietnam was coming from the north by means of the ancient water routes along the coast.

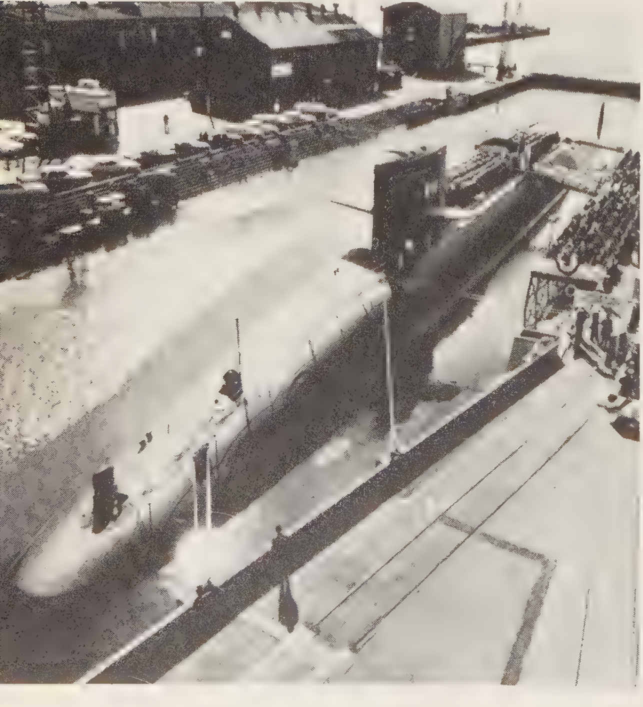
Within three weeks the United States reacted with its sea power. Marines landed on March 8 at Danang, about 100 miles south of the 17th parallel of latitude, which is the border between North and South Vietnam. This landing was possible because a reinforced battalion of Marines is kept continually embarked in amphibious ships as part of the 7th (Far East) Fleet. The establishment of a base at Danang marked a change in United States military policy from advisory warfare to holding enclaves with organized U.S. forces supported from the sea. This direct participation in the ground war required a buildup of Marines and Army troops to nearly 200,000 men by the end of 1965. All but a fraction of them were transported by ship. (See also VIETNAM.)

Under the new policy the Navy began construction of a permanent base at Camrahn Bay, up the coast from Saigon. Completion will put Malacca Strait, one of the world's most critical seaways, within the protective reach of U.S. sea power.

Navy responsibilities off South Vietnam are: (1) carrier aircraft destruction of bases and supply lines in North Vietnam; (2) carrier aircraft support of ground troops; (3) amphibious support of enclaves; (4) control of coastal waters; and (5) overseas logistic support of ground and air forces. The first three missions are being effectively fulfilled. Carrier forces off Vietnam were strengthened in December by the U.S.S. *Enterprise*, the world's largest warship and largest nuclear-powered ship. For the fourth mission, the Navy had to get assistance from the U.S. Coast Guard in the form of 82-foot patrol boats. The Navy's most difficult task may be to gain control of the extensive navigable waters of the Mekong Delta, where the Vietcong are strong. Because of the condition of the U.S. merchant marine, the Navy's Military Sea Transportation Service (MSTS) cannot discharge its responsibility of transporting men and supplies from the United States without the aid of foreign flag ships.

U.S.S. *SIMON BOLIVAR*, the Navy's 31st Polaris submarine, was commissioned at Newport News, Va., October 29.

WIDE WORLD



The Dominican Crisis. During the revolution and occupation in the Dominican Republic, starting in April, naval ships evacuated refugees and landed Marines. Hard-pressed MSTS ships furnished sea support for occupation troops. (See DOMINICAN REPUBLIC.)

NATO Operations. Notable naval activities of 1965 included continued efforts to integrate North Atlantic Treaty Organization (NATO) naval forces. NATO naval integration took two forms, the most promising being Match Maker, a five-month employment of an antisubmarine unit composed of British, Canadian, Dutch, and American destroyer types. This four-ship squadron participated in NATO and U.S. exercises and operated out of ports of the participating countries to test logistic support.

Less successful was the mixed manning of the U.S. missile destroyer *Claude V. Ricketts*, with personnel from the navies of the United States, Britain, the Netherlands, West Germany, Italy, Greece, and Turkey. This hasty experiment suffered from State Department pressure and from the unpopularity in Europe of the United States concept of a multilateral force (MLF). France refused to participate, and Turkey withdrew her contingent. Different pay scales, standards of living, and codes of discipline created shipboard problems. However, *Ricketts'* performance in the 6th (Mediterranean) fleet was superior. The U.S. Navy derived much benefit from a close and critical scrutiny of one of its ships by experienced junior and petty officers of other navies. In December, the U.S. government dropped the MLF plan.

Admiral H.P. Smith, NATO's supreme allied commander, Atlantic, retired on May 1 and was relieved by 53-year-old Thomas H. Moorer, who also became commander in chief, Atlantic Fleet.

Deep-Sea Submergence Program. The major deep-sea submergence project for 1965 was *Sealab II*. A 12-by-52-foot cylinder was placed in 205 feet of water off La Jolla, Calif., on August 26. Three ten-man crews lived in and worked from it, each for 15 days. They constructed an underwater oceanography station and an experimental oil rig. (See also OCEANOGRAPHY.)

The Functions and Resources of the Navy. The fact that the Navy was engaged in a war in Southeast Asia, besides carrying on duties in other parts of the world, focused attention on how well this branch of the armed service is fulfilling its responsibilities for national security. The Navy's function is to use the waters of the earth to defend the Western Hemisphere, maintain overseas communications, and support national policy wherever necessary. No navy disputes the control of the seas that the U.S. Navy gained in World War II. Therefore, its efforts can be devoted to using that control—protecting sea routes, surface and air; projecting military power overseas; providing nuclear deterrence; and gaining control of enemy waters.

The Navy has assumed a major role in the nation's nuclear deterrence policy through its highly successful Polaris-equipped, nuclear-powered submarines. However, this role has been carried out at the cost of some sacrifice of readiness to meet the Navy's other responsibilities. Antisubmarine warfare capabilities have not kept pace with increased potential of the submarine. The promising nuclear propulsion program for surface ships has been delayed by the Defense Department because of costs.

Other problems include the discovery that missile armaments in surface ships have been less successful than anticipated. Operations off Vietnam have forced renewed emphasis on guns, propeller-driven aircraft, and small combat ships. The big-ship, deep-water U.S. Navy is neither trained nor equipped for the kind of coastal operations that are essential in the war in Vietnam. Lack of naval interest in the merchant marine is in part responsible for the latter's incapacity to perform its military support duties.

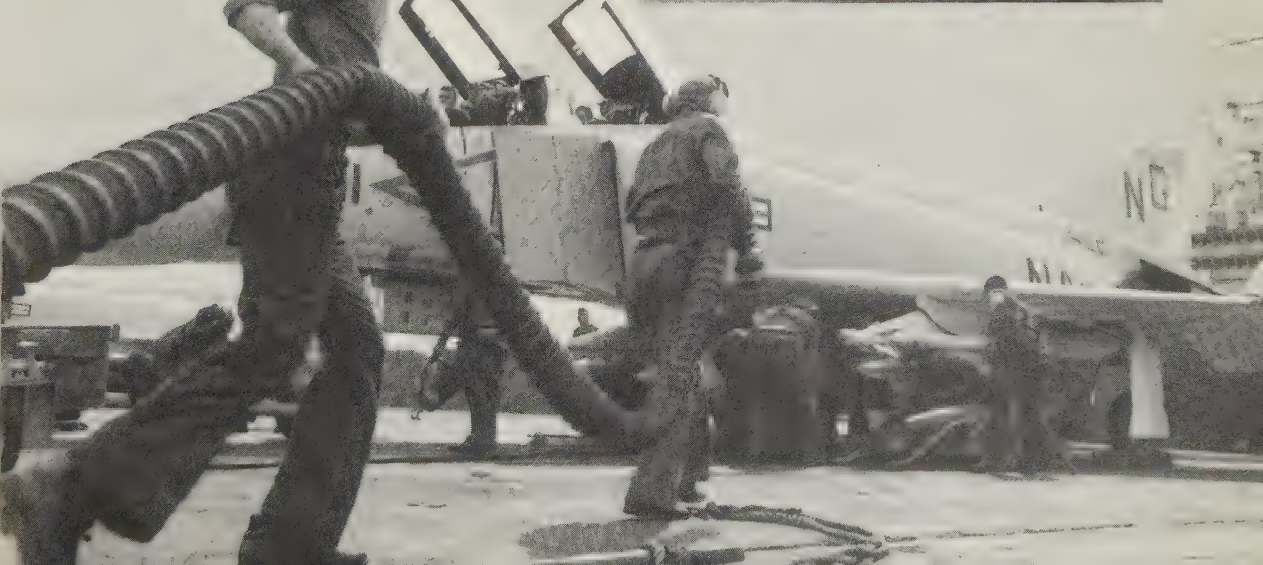
The defense budget has given a high priority to preparation for possible nuclear war—to Atlas and Titan missiles, for example. Yet some of the heaviest of the present burdens of national security are being borne by World War II carriers, destroyers, amphibious craft, and merchant ships. For example, the *Coral Sea,* a carrier built between 1944 and 1947, operated for 331 days off the coast of Vietnam. As the United States is sea centered in an

U.S. NAVY PHOTO FROM UPI

AIRCRAFT BOMBS for use in the war in Vietnam are rolled across the hangar deck of carrier U.S.S. *Ticonderoga.*

U.S.S. *ENTERPRISE,* nuclear-powered aircraft carrier, began combat operations off Vietnam in December. (*Below*) A fighter-bomber is prepared for a strike to support ground troops. (*Right*) A deck crewman guides a jet to the catapult.

UPI PHOTOS



KEYSTONE PRESS

SAILORS OF SIX NATIONS (Italy, West Germany, the Netherlands, Britain, the United States, and Greece) made up an experimental crew for a U.S. destroyer during 1965, to test the proposed multilateral force (MLF) under NATO.

oceanic world and the cold war has been basically maritime, the Navy has been involved in almost every phase of the East-West struggle.

JOHN D. HAYES
Rear Admiral, USN (Ret.)

NEBRASKA

Bountiful rains in Nebraska during the 1965 growing season removed the earlier threat of drought. The result was a bumper crop—11% above 1964 and the sixth largest on record. Composite yields—the highest recorded—were 14% above average. Reserves of soil moisture in the fall, especially important for the state's winter wheat and livestock production, were the highest since soil moisture tests were begun in 1937.

Legislation. The Nebraska Legislature was in session 149 legislative days. It considered 937 bills and enacted 584 laws, thus toppling records which had been established in 1963. Reversing a long-established tradition of opposing a broadened tax base, the legislature enacted a flat rate for individual and corporate income taxes, effective Jan. 1, 1967. Opponents of the measure immediately began to circulate referendum petitions, and secured the requisite number of signatures to place the question on the ballot in the general election of November 1966.

The legislature authorized a six-year, $68.5 million building fund, primarily for the University of Nebraska and state colleges. It also established a program of college scholarships for deserving farm youths, and provided for an enlarged system of state vocational technical schools.

Legislative reapportionment was carried out during the 1965 session. While retaining the present membership of 49, the legislature crossed county lines to establish new legislative districts.

Other legislation included a fair employment practices law, provisions for the expansion of state park and recreational areas, and the creation of a state council on the arts. Later in the year, Nebraska became the first state in the union to complete its enrollment in the federal Medicare program.

State appropriations from all sources totaled $437,585,726 for the 1965–67 biennium, as compared with $374,288,000 for 1963–65. The appropriations required $137,088,805 in new tax funds, or $41,692,068 more than was required for the 1963–65 biennium.

NEBRASKA · Information Highlights

Area: 77,227 square miles.
Population: 1,507,000 (1965 est.).
Chief Cities (1965 est.): Lincoln, the capital (149,000); Omaha (340,000); Grand Island (28,600); Fremont (22,500); Hastings (21,900); North Platte (17,800); Kearney (15,600); Norfolk (14,700).
Government: *Chief Officers*—governor, Frank B. Morrison (Democrat); lt. gov., Philip C. Sorensen (D); secy. of state, Frank Marsh (R); atty. gen., Clarence A.H. Meyer (R); treas., Frederick Sorensen; comm. of education, Dr. Floyd A. Miller; chief justice, Paul W. White. *Legislature* (unicameral)—49 members (convened Jan. 5, 1965).
Education: *School enrollment* (1964–65)—public elementary, 201,000 pupils (8,700 teachers); public secondary, 119,000 pupils (6,100 teachers); nonpublic schools, 64,800 pupils (2,010 teachers); college and university (fall 1964), 43,539 students. *Public school expenditures* (1964–65)—$123,800,000 ($407 per pupil); average teacher's salary, $5,000.
Public Finance: (fiscal year 1965): *Revenues*, $267,058,382 (motor fuel tax, $48,264,020; federal funds, $28,583,346). *Expenditures*, $263,980,373 (education, $24,447,401; health, welfare, and safety, $27,184,529; highways, $70,319,806). *State debt* (net long-term), $28,661,000 (fiscal year 1964).
Personal Income (1964): $3,477,000,000; average annual income per person, $2,349.
Public Assistance (fiscal year 1965): $22,273,582 to 32,551 recipients (aged $12,018,176; dependent children, $5,797,680).
Labor Force (employed persons, July 1965): *Agricultural*, 173,000; *nonagricultural* (wage and salary earners), 488,000 (17% manufacturing, 25% trade, 21% government). *Unemployed persons* (July 1965)—16,600.
Manufacturing (1963): Value added by manufacture, $743,087,000 (transportation equipment, $34,096,000; primary metals, $26,000,000; nonelectrical machinery, $47,664,000; electrical machinery, $65,055,000; fabricated metals, $40,054,000; food and products, $314,679,000; printing and publishing, $50,238,000; chemicals and allied products, $42,599,000).
Agriculture (1964): *Cash farm income*, $1,464,313,000 (livestock, $881,918,000; crops, $417,496,000; govt. payments, $164,899,000). *Chief crops* (tons)—hay, 6,076,000 (ranks 5th among the states); corn for grain, 5,993,000 (rank, 5th); alfalfa, 3,845,000 (rank, 5th); sorghum grain, 2,614,000 (rank, 3rd); wheat, 2,215,000 (rank, 6th); sugar beets, 1,403,000 (rank, 4th); oats, 366,000 (rank, 12th); barley, 57,000 (rank, 20th); rye, 62,000 (rank, 3rd); potatoes, 96,000.
Mining (1964): *Production value*, $91,959,000 (ranks 31st among the states). *Chief minerals* (tons)—petroleum, 19,113,000 barrels (rank, 16th); natural gas, 11,155,000,000 cubic feet (rank, 19th); sand and gravel, 14,641,000; stone, 3,779,000; clays, 143,000.
Transportation: *Roads* (1965), 102,874 miles (12,851 paved); *motor vehicles* (1964), 921,846; *railroads* (1965), 7,804 miles; *airlines* (1965), 5 (359 airports).
Communications (1965): *Telephones*, 690,100; *television stations*, 15; *radio stations*, 55; *newspapers*, 21 (daily circulation, 482,607 in 1964).

Education. College and university enrollments continued to increase, with the University of Nebraska reaching a record enrollment of 15,138 students. Dr. Leland Traywick was inaugurated as president of the University of Omaha, succeeding Dr. Milo Bail, who retired. The governing boards of the state-supported colleges and universities formed an organization to develop more effective means of cooperation.

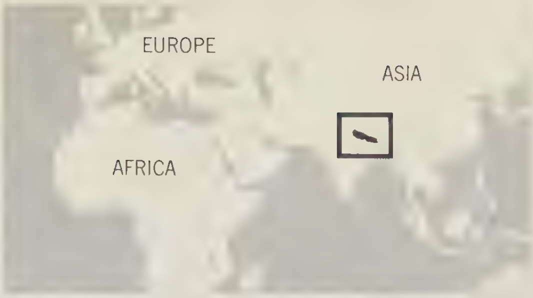
Centennial Celebration. In preparation for the centennial of statehood in 1967, the legislature appropriated funds for the State Centennial Commission and designated the Thomas P. Kennard House, the oldest building in Lincoln, as the Nebraska Statehood Memorial.

Economy. Economic conditions in the state remained generally good in 1965. Unemployment and related problems, however, were expected to arise with the closing of Lincoln Air Force Base, which was scheduled to be inactivated by March 1966.

JAMES C. OLSON
Associate Dean of the Graduate College, Professor of History, University of Nebraska

NECROLOGY, 1965. See the selected listing of prominent persons who died in 1965 on pages 757–768. Separate biographies of certain prominent persons also appear under their own headings throughout this volume.

NEPAL



The government of Nepal underwent a change early in 1965. Premier Tulsi Giri resigned on Jan. 25, 1965, and on the following day King Mahendra appointed Surya Bahadur Thapa as the new premier. Thapa also became chairman of the Council of Ministers. Kirtinidhi Bista was appointed as Nepal's foreign minister.

Foreign Aid. Nepal continued to receive foreign aid from both Communist and Western nations in 1965.

On March 29 the Nepalese Ministry of Economic Planning announced that India had agreed to construct more than 400 miles of highway from the eastern to the western border of Nepal. The United States agreed to provide road-building machinery for the project.

At the same time, Nepal announced that it had agreed with India to keep Communist China out of economic aid projects in Terai, the southern Nepalese area bordering on India. Consequently, at Nepal's request, Communist China withdrew resources previously earmarked for the Ithari-Dhalkewar section of the highway and also from a Kamala irrigation project. The resources were to be diverted to other projects upon mutual agreement by Nepal and Communist China.

Later, in August, Communist China agreed to grant Nepal $28 million for construction of a highway linking Katmandu, the Nepalese capital, with Pokhara, in the central region of Nepal. In addition to funds, Communist China also agreed to provide

NEPAL · Information Highlights

Area: 54,362 square miles.
Population: 9,900,000 (mid-1964 est.).
Chief Cities (1961 census): Katmandu, the capital, 122,507; Lalitpur, 48,776; Bhaktpur, 37,075; Biratnagar, 33,292.
Government: *King*—Mahendra Bir Bikram Shah Deva (acceded 1955); *Premier*—Surya Bahadur Thapa (took office Jan. 26, 1965). *Parliament*—Panchayat, 125 members.
Religious Faiths: Hinduism, Buddhism.
Education: *Literacy rate* (1954)—5% of population aged 15 and over. *Total school enrollment* (1961)—219,687 (primary, 149,921; secondary, 63,480; teacher-training, 612; technical, 386; higher, 5,288).
Finance (1964–65 budget): *Revenues* (taxation), $23,500,000; *expenditures*, $16,100,000; *monetary unit*, Nepalese rupee (7.619 rupees equal U.S.$1).
Chief Crop: Rice (1962–63), 1,250,000 metric tons.
Foreign Trade (1960–61): *Exports*, $26,600,000 (chief exports: food grains, jute, timber, oilseeds, ghee, potatoes, medicinal herbs, hides and skins); *imports*, $53,300,000 (chief imports: textiles, cigarettes, salt, gasoline, sugar, machinery). *Chief trading partner:* India.
Transportation: *Roads* (1964), 300 miles; *motor vehicles* (1963), 2,921 (automobiles, 2,053); *railways* (1963), 63 miles; *civil airline*, Royal Nepal Airlines; *principal airport*, Katmandu.
Communications: *Telephones* (1964): 1,500; *radios* (1964), 30,000; *newspapers* (1960), 13 (daily circulation, 7,000).

UPI

NEPALESE SIDE OF MOUNT EVEREST was used by an Indian mountain climbing expedition in their successful ascent to the summit in May 1965.

technicians to aid in constructing the new highway.

Kosi Barrage. On April 24, 1965, at Bhimnagar, near the Nepalese-Indian frontier, King Mahendra and Indian Prime Minister Shastri inaugurated the Kosi Barrage, part of the Kosi irrigation and hydroelectric project. When completed, the project will help irrigate about 2.6 million acres of land in the northern Bihar state of India and the southern territory of Nepal. The United States will assist in financing the project.

Military Aid. In April, Nepal received its first consignment of military aid from Britain, in the form of ammunition. The aid is part of a U.S.-British agreement with Nepal to modernize the Nepalese Army's equipment. Earlier, two consignments of American medical, transportation, and communication equipment arrived in Nepal.

Land Reform. Nepal continued to move forward in 1965 with land reform and resettlement, which had begun late in 1964. The reform, which is expected to be completed in 1967, involves nearly 5 million acres.

Mount Everest Expedition. Four Indian mountain climbing teams, which included Nepalese Sherpa guides, reached the summit of Mount Everest between May 20 and May 29.

NETHERLANDS

A controversy over the future development of commercial radio and television resulted in the resignation of Premier Victor G.M. Marijnen's cabinet on Feb. 27, 1965. Joseph M.L.T. Cals, a member of the Catholic People's party, who had served several times as minister of education, formed a coalition cabinet of the Catholic People's, Socialist, and Calvinist parties. The new cabinet was sworn in April 14. The new cabinet did not undertake any great changes in policy.

The Royal Family. Queen Juliana's announcement on June 28, 1965, of the engagement of Crown Princess Beatrix, aged 27, to Claus von Amsberg, aged 38, a West German diplomat, caused considerable public dissatisfaction. Von Amsberg had been a member of the Hitler Youth organization and had served in the 90th Panzer Division during World War II, but neither he nor his immediate family had any apparent connection with the National Socialist party.

The announcement of Princess Beatrix's proposed marriage, coming only a year after the government crisis that resulted in Princess Irene's renouncing her claim to the throne when she married Prince Carlos Hugo of Spain, caused public discussion of the desirability of retaining the monarchy. By October, several hundred thousand persons had signed a petition asking Parliament to withhold consent to the marriage, which was scheduled to take place in the spring of 1966. (Parliament must approve the marriages of heirs to the throne.) Earlier, the engagement of Princess Margriet, the queen's third daughter, to Pieter van Vollenhoven, a Dutch commoner, was announced.

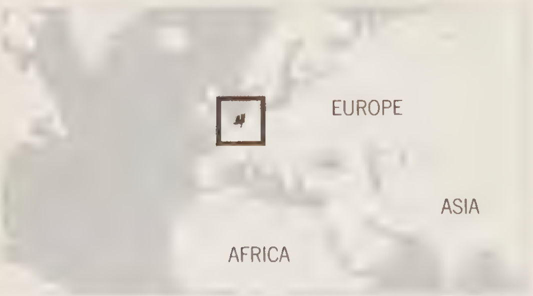
Taxation. At the opening of Parliament on Sept. 21, 1965, the Dutch were told that greater spending for housing and road projects and for education called for higher taxes on luxury goods. Other tax increases were also contemplated.

Economy. The economic boom of 1964, when the gross national product rose 7.5%, continued in 1965 at a rate exceeding cautious forecasts. With exports up about 10% over 1964, and imports at about the same level, the balance of payments position improved, and there was a possibility of wiping out the 1964 trade deficit.

Employer and employees' organizations annually review wages and negotiate increases. Between 1945 and 1963 the government virtually set the wage and price scales, but now it intervenes only if no agreement is reached or if an agreement is detrimental to the national economy. Wages rose 9 to 10% in 1965, or almost double the advances agreed upon, but still well below the 17% increase of 1964. Increased wage costs were absorbed largely by the steady rise in domestic and foreign sales.

Worker productivity increased in 1965, but not as

NETHERLANDS · Information Highlights



Area: 12,978 square miles.

Population: 12,278,000 (June 1, 1965, est.).

Chief Cities (1963 est.): Amsterdam, the capital, 868,159; Rotterdam, 731,942; The Hague, 604,818; Utrecht, 262,278.

Government: Queen—Juliana (b. 1909; acceded 1948); *Prime Minister*—Joseph M.L.T. Cals (took office April 12, 1965). *Parliament*—Staten-Generaal, First Chamber, 75 members: party seating (1963), Catholic People's, 50; Labor, 43; Anti-Revolutionaries, 17; Christian Historical, 13; Freedom and Democracy, 16; Pacifist Socialist, 6; Communists, 4; others, 7. Second Chamber, 150 deputies.

Religious Faiths: Protestants, 41% of population; Roman Catholics, 40%; Jews, 0.1%.

Education: *Literacy rate* (1962), 99% of population. *Total school enrollment* (1962)—2,542,879 (primary, 1,395,047; secondary, 505,967; teacher-training, 6,254; technical, 516,945; higher, 118,666).

National Income (1964): $13,700,000,000; average annual income per person, $1,388.

Finance (1965 est.): *Revenues*, $3,792,000,000; *expenditures*, $3,896,000,000; *public debt* (1964), $5,517,000,000; *monetary unit*, guilder (3.62 guilders equal U.S.$1).

Gross National Product (1964): $16,800,000,000.

Economic Indexes: *Industrial production*, (1964), 151 (1958=100); *agricultural production*, 118 (1956–57=100); *cost of living*, 119 (1958=100).

Manufacturing (metric tons, 1964): Gasoline (1963), 3,660,000; cement, 2,873,000; crude steel, 2,653,000; wheat flour (1963), 670,000; meat (1963), 664,000; cheese, 212,400.

Crops (metric tons, 1964): Potatoes, 4,082,000 (ranks 9th among world producers); sugar beets, 4,000,000 (world rank, 11th); oats, 410,000 (world rank, 17th); rye, 356,000 (world rank, 11th); wheat, 718,000; barley, 372,000; linseed, 35,000; flax (1963), 33,800.

Minerals (metric tons, 1964): Anthracite coal, 3,900,000 (ranks 10th among world producers); salt, 1,596,000 (world rank, 15th); sulfur (1963), 35,000; cadmium, 40; crude petroleum, 15,758,000 barrels.

Foreign Trade (1964): *Exports*, $5,807,000,000 (chief exports, 1963: vegetables, $228,000,000; aircraft, $133,000,000; gasoline, $122,000,000; organic chemicals, $112,000,000); *imports*, $7,055,000,000 (chief imports, 1963: crude petroleum, $411,000,000; automobiles, $178,000,000; coal, $157,000,000). *Chief trading partners* (1963): West Germany (took 26% of exports, supplied 24% of imports); Belgium-Luxembourg (took 15% of exports, supplied 19% of imports); U.S. (took 4% of exports, supplied 11% of imports.

Transportation: *Roads* (1964), 54,400 miles (all paved); *motor vehicles* (1964), 1,213,000 (automobiles, 985,300); *railways* (1963), 2,017 miles; *merchant vessels* (1964), 1,513 (4,556,000 gross registered tons); *national airline*, Royal Dutch Airlines (KLM); *principal airports*, Amsterdam, Rotterdam.

Communications: *Telephones* (1964): 2,023,258; *television stations* (1964), 7; *television sets* (1964), 1,825,000; *radios* (1963), 3,097,000; *newspapers* (1962), 97 (daily circulation, 3,335,000).

PIX

NETHERLANDS QUEEN JULIANA (*right,* on a visit to Surinam in December with her husband Prince Bernhard) announced the engagement of her daughter Princess Beatrix to West German diplomat Claus von Amsberg (*above*) on June 28, 1965.

KEYSTONE PRESS

fast as wages rose. Despite the steady recruitment of foreign workers, there were about four times as many vacancies as unemployed persons. The persistent labor shortage exerted pressure on wages, and "black," or under-the-table, wages were not uncommon. (Employers granting wages in excess of the agreed increase can be fined.)

Industry. Industrial production was on the increase, with the chemical industry as the biggest gainer. Shipbuilding and textiles lagged. There were new discoveries of natural gas in North Holland, and larger estimates of reserves were made.

Holland and England agreed upon a division of the North Sea for exploratory drilling for natural gas and oil, but not much success has been achieved in these exploratory operations. The government reserved the right to take up to 50% of the profits from off-shore exploitation, according to the potential of each discovery.

The government spent $100 million to improve Rotterdam's harbor, the country's largest port, which earns a large share of the national income.

Farming. Agricultural production suffered because of adverse weather conditions in 1965. Measures taken by the government to help farmers expand production include voluntary redistricting and buying of farms from older farmers to increase the size of holdings, credit aids for mechanization, new roads, and drainage and soil-improvement projects.

Loan to Indonesia. Improved relations with Indonesia were reflected in the $4.17 million credit for rehabilitation of the tin-mining facilities on Bangka Island. The loan was part of a $28 million credit agreed upon earlier.

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NEVADA

November 13 was a historic day for Nevada: it marked the close of a special session in which the legislature voted to reapportion itself. The act ended 50 years legislative domination by rural counties, switching control to populous Clark and Washoe counties. Governor Grant Sawyer signed the reapportionment bill on November 15.

Legislation. The legislature, in its 53rd regular session, enacted a civil rights bill against discrimination because of race, color, religion, or national origin. Housing facilities, however, were not included in the bill's provisions. The legislature also passed a 5% cabaret tax and a bill permitting a prisoner to be paroled after serving one third of his sentence if

NEVADA · Information Highlights

Area: 110,540 square miles.

Population: 426,000 (1965 est.).

Chief Cities (1965 est.): Carson City, the capital (7,400); Las Vegas (110,000); Reno (68,000).

Government: *Chief Officers*—governor, Grant Sawyer (Democrat); lt. gov., Paul Laxalt (R); secy. of state, John Koontz (D); atty. gen., Harvey Dickerson (D); treas., Michael Mirabelli (D); acting chief justice, Gordon Thompson. *Legislature*—Nevada State Legislature (convened Jan. 18, 1965); Senate, 17 members (8 Republicans, 8 Democrats, 1 other); Assembly, 37 members (25 D, 12 R).

Education: *School enrollment* (1964–65)—public elementary, 88,000 pupils (2,500 teachers); public secondary, 47,000 pupils (1,700 teachers); nonpublic schools, 4,600 pupils (120 teachers); college and university (fall 1964), 6,814 students. *Public school expenditures* (1964–65)—$48,000,000 ($505 per pupil); average teacher's salary, $6,530.

Public Finance (fiscal year 1964): *Revenues,* $161,754,000 (2% sales tax, $21,253,000; motor fuel tax, $13,886,000; federal funds, $47,163,000). *Expenditures,* $151,264,000 (education, $37,311,000; health, welfare, and safety, $10,188,000; highways, $53,368,000). *State debt,* $6,726,000 (1964).

Personal Income (1964): $1,325,000,000; average annual income per person, $3,248.

Public Assistance (fiscal year 1965): $4,886,693 to 7,813 recipients (aged, $2,776,792; dependent children, $1,890,452).

Labor Force (employed persons, December 1964): *Agricultural,* 4,800; *nonagricultural* (wage and salary earners), 169,300 (4.1% manufacturing, 18.0% trade, 16.5% government). *Unemployed persons* (mid-July 1965)—10,800.

Manufacturing (1963): Value added by manufacture, $111,733,000; food and products, $11,376,000; stone, clay, and glass products, $31,812,000.

Agriculture (1964): *Cash farm income,* $43,386,000 (livestock, $33,077,000; crops, $9,192,000; govt. payments, $1,117,000). *Chief crops* (tons)—hay 669,000; alfalfa 415,000; wheat, 25,500; barley, 15,600; potatoes, 3,600; oats, 2,160.

Mining (1964): *Production value,* $85,137,000 (ranks 33rd among the states). *Chief minerals* (tons)—iron ore, 1,020,000 (ranks, 9th); gypsum, 799,000 (rank, 5th); copper, 67,272 (rank, 6th); lead, 809 (rank, 16th); silver, 172,000 troy ounces (rank, 9th); gold 90,469 troy ounces (rank, 5th).

Transportation: *Roads* (1965), 45,879 miles (4,802 paved); *motor vehicles* (1965), 303,526; *railroads* (1965), 2,060 miles; *airlines* (1965), 7 (66 airports).

Communications: (1965): *Telephones,* 207,800; *television stations,* 5; *radio stations,* 20; *newspapers,* 7 (daily circulation, 118,962).

the sentence is more than a year in length. Medical aid for the aged and increases in unemployment benefits under the Kerr-Mills Act were authorized, and pay raises were granted to the governor ($20,000 to $25,000) and other state officers.

Economic Review. Nevada had an all-time record rainfall in August. Reservoirs were filled above normal levels, fire hazards were reduced, and irrigation water in storage provided an exceptional carry-over. The hay crop, however, was poor in quality and quantity, and low temperatures in September damaged crops. Even so, the ranges were in the best condition in five years.

Gambling casinos reported a record gross of $295,400,000 for the fiscal year 1964–65. The state received $15,100,000 of this amount—an increase of 4% over 1963–64.

Unemployment compensation benefits were increased, and the wage base for figuring disability benefits was raised. Also, the wage rate for workers over 17 years of age was raised to $1.25 an hour.

Water Supply. To meet the water shortage problem, President Lyndon B. Johnson signed the $81 million Southern Nevada Water Supply Project Bill on Oct. 23, 1965. The bill provided the first assurance of adequate supplies of water for the most populous area of Nevada. In addition, the Water Resources Building at the University of Nevada was dedicated for experimentation in desalinization.

Mining Development. The pouring of the first ingot of gold from a new open-pit gold mine near Carlin, Elko County, took place on May 27, 1965. With reserves estimated at 7,000,000 tons, the new mining operation is second in size only to the gold operation at Lead, South Dakota.

A new fuel-generating plant to be built on the Colorado River, below Davis Dam in Clark County, will be fueled by Navajo and Hopi coal reserves at Black Mesa, Ariz. With a total investment of $150 million to be made in the project, potential royalties to the Indians are estimated to total $30 million. Operation has been slated for 1970–71.

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NEW BRUNSWICK

News of a vast new industrial complex planned for New Brunswick, coupled with Premier Louis J. Robichaud's designation of a council to encourage further industrialization in the province, provided new impetus to the economy in 1965.

Economy. Brunswick Mining and Smelting Corporation of Belledune Point, in northern New Brunswick, announced plans for a $117 million expansion program in October. The new units will comprise a $64 million steel mill, two base-metal concentrators, a chemical and fertilizer plant, and extensive shipping and handling facilities, including a new ore carrier. To complement this expansion, Minister of Fisheries H.J. Robichaud announced that the province would build a $16 million port at the site capable of handling 5 million tons of cargo annually. Fraser Company, Ltd., announced a $25 million expansion of its plant at Newcastle that will enable it to process an additional 280 tons of unbleached pulpwood annually.

Under the guidance of a 12-man industrial council appointed by Premier Robichaud, other industries will be encouraged to locate their plants in New Brunswick.

NEW BRUNSWICK · Information Highlights

Area: 28,354 square miles.
Population: 625,000 (Oct. 1, 1965, est.).
Chief Cities (1961 census): Fredericton, the capital (19,683); Saint John (55,153); Moncton (43,840); Lancaster (13,848); Edmundston (12,791).
Government: *Chief Officers*—Lieutenant governor, John B. McNair; premier, Louis J. Robichaud (Liberal Party); prov. secy., Joseph E. LeBlanc (L); min. of finance, L.G. DesBrisay (L); min. of educ., Henry G. Irwin (L); chief justice, G.F.G. Bridges. *Legislature*—Legislative Assembly (convened Feb. 16, 1965), 52 members (32 Liberals; 20 Conservatives).
Education: *School enrollment* (1964–65 est.)—public elementary and secondary, 178,794 pupils (6,143 teachers); private (1963–64), 1,993 (154); Indian, 645 (24); college and university (1964–65), 6,922. *Public school expenditures* (1963)—$44,500,000; teachers' average salary, $3,572.
Public Finance (fiscal year 1965 est.): *Revenue*, $103,070,000 (sales tax, $30,425,000; income tax, $12,006,000; federal funds, $35,613,000); *expenditures*, $118,130,000 (health and welfare, $33,630,000; transportation and communications, $24,630,000; education, $22,320,000).
Personal Income (1964): $769,0000,000; average annual income per person, $1,242.
Public Assistance (fiscal year 1965 est.): $8,050,000 (aged and blind, $2,990,000; dependents and unemployed, $3,520,000).
Labor Force (1961 census, agricultural and manufacturing only): *Agricultural*, 12,727; *manufacturing*, 23,599.
Manufacturing (1962): *Value added by manufacture*, $171,900,000 (transportation equipment, $14,239,000; nonelectrical machinery, $449,000; electrical machinery, $3,931,000; fabricated metals, $7,541,000; food and products, $51,966,000).
Agriculture (1964 est.): *Cash farm income*, $49,070,000 (livestock, $26,580,000; crops, $19,559,000). *Chief crops* (cash receipts)—potatoes, $15,761,000 (ranks 1st among the provinces); fruits, $1,407,000 (rank, 5th); tobacco, $32,000 (rank, 5th).
Mining (1964 est.): *Production value*, $49,856,301. *Chief minerals* (tons)—zinc, 53,785 (ranks 4th among the provinces); coal, 997,187 (rank, 3rd); copper, 10,523 (rank, 7th); lead, 22,377 (rank, 3rd); stone, 2,952,297 (rank, 4th); cement, 176,584 (rank, 7th).
Fisheries (1964): *Commercial catch*, 251,779,000 pounds ($10,233,000). *Leading species*—lobster, 151,066,000 ($1,681,000); cod, 37,916,000 ($1,402,000); salmon, 1,039,000 ($634,000).
Transportation: *Roads* (1962), 13,738 miles (all surfaced); *motor vehicles* (1964), 168,329; *railroads* (1963), 1,771 miles; *airlines* (1963), 2 (8 airports).
Communications (1963): *Telephones*, 152,793; *television stations*, 3; *radio stations*, 12; *newspapers*, 6 (daily circulation, 99,287).

Legislature. At a special session of the provincial legislature in 1965, the government announced plans for a "program of evolution" to bring responsibility for education, justice, and health and welfare under provincial jurisdiction. The proposal, which would be financed by an increase in the sales tax from 3% to 6%, effective April 1966, engendered considerable controversy in the province since it would remove these services from municipal control.

Conservative opposition leader C.B. Sherwood called for a vote of "no confidence" in the Liberal government in the Legislative Assembly late in December, but was defeated on a party-line vote.

Power. In his January budget message, U.S. President Lyndon B. Johnson proposed construction of the $227 million Dickey Dam on the Saint John River between New Brunswick and Maine, and the U.S. Congress passed the measure on October 20. It is expected that this Canadian-American power development will eventually be linked with the Passamaquoddy tidal power project.

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NEW HAMPSHIRE

A controversial bill banning certain speakers from the University of New Hampshire campus and a running feud between Democratic Governor John W. King and Health and Welfare Commissioner James J. Barry highlighted a generally productive legislative session in 1965.

Speaker-Ban Bill. After heated debate, the speaker-

NEW HAMPSHIRE · Information Highlights

Area: 9,304 square miles.
Population: 639,000 (1965 est.).
Chief Cities (1965 est.): Concord, the capital (29,500); Manchester (89,500); Nashua (43,500); Portsmouth (28,000); Dover (21,000).
Government: *Chief Officers*—governor, John W. King (Democrat); secy. of state, Robert L. Stark (Republican); atty. gen., William Maynard (R); treas., Robert W. Flanders (R); chief justice, Frank R. Kenison. *Legislature*—General Court (convened Jan. 4, 1965); Senate, 24 members (15 Republicans, 8 Democrats, 1 vacancy); House of Representatives, 400 members (217 R, 177 D, 6 vacancies).
Education: *School enrollment* (1964–65)—public elementary, 79,801 pupils (2,950 teachers); public secondary, 45,569 pupils (2,225 teachers); nonpublic schools, 40,400 pupils (1,600 teachers); college and university (fall 1964), 16,377 students. *Public school expenditures* (1964–65)—$52,538,000 ($448 per pupil); average teacher's salary, $5,435.
Public Finance (fiscal year 1965): *Revenues*, $176,502,587 (motor fuel tax, $16,625,036; federal funds, $28,219,450). *Expenditures*, $176,877,491 (major allocations, 1964: education, $23,312,000; health, welfare, and safety, $14,226,000; highways, $42,745,000). *State debt*, $92,366,000 (June 30, 1965).
Personal Income (1964): $1,555,000,000; average annual income per person, $2,377.
Public Assistance (fiscal year 1964): $10,551,000 (aged, $4,223,000; dependent children, $1,751,000).
Labor Force (employed persons, June 1965): *Agricultural* 8,900; *nonagricultural* (wage and salary earners), 226,270 (39.1% manufacturing, 17.7% trade, 13.3% government). *Unemployed persons* (June 1965)—6,000.
Manufacturing (1963): Value added by manufacture, $654,075,000 (primary metals, $16,118,000; nonelectrical machinery, $79,047,000; electrical machinery, $104,725,000; fabricated metals, $17,328,000; food and products, $28,804,000; leather and leather products. $106,793.000).
Agriculture (1964): *Cash farm income*, $52,393,000 (livestock, $40,330,000; crops, $11,391,000; govt. payments, $672,000). *Chief crops* (tons)—hay, 183,000; apples, 28,300; potatoes, 13,500; peaches, 600; maple syrup, 51,000 gallons.
Mining (1964): *Production value*, $7,302,000 (ranks 48th among the states). *Chief minerals* (tons)—sand and gravel, 8,768,000; stone, 202,000; clays, 46,000.
Fisheries (1964): *Commercial catch*, 1,209,000 pounds ($601,000).
Transportation: *Roads* (1965), 14,385 miles (8,603 surfaced); *motor vehicles* (1964), 233,389; *railroads* (1964), 1,067 miles; *airports* (1965), 42.
Communications (1965): *Telephones*, 28,100; *television stations* (1964), 1; *radio stations* (1964), 28; *newspapers*, 9 (daily circulation in 1964, 138,332).

ban bill, designed to prevent Communist speakers on the University of New Hampshire campus in Durham, was defeated by a vote of 205–176. Governor King and Democratic legislators largely supported the ban, while Republican members voted overwhelmingly against it.

Departmental Reorganization Efforts. Governor King's efforts to reorganize the Department of Health and Welfare and the Department of Resources and Economic Development were thwarted by the Republican-controlled legislature. The legislature passed substitute bills designed to improve the administration of both departments, but Governor King vetoed the Resources and Economic Development bill.

New Tax Levies. Despite renewed interest in a broad-based tax, the legislature resisted any new revenue-raising proposals. Instead, the pressing need for additional state revenue was partially offset by following the governor's recommendation of raising existing levies on beer, tobacco, utilities, and inheritances. Substantial increases were also made in motor vehicle and license fees.

Labor Legislation. The legislature passed a bill to raise weekly unemployment compensation benefits from $45 to $49.

Sweepstakes. In its second year of operation, the state-operated sweepstakes proved to be something of a disappointment to its supporters. Revenue from the "Sweeps" fell to $3.9 million in 1965—off more than 30% from the $5.7 million grossed in 1964. Net sweepstakes proceeds available for distribution to local school districts in 1965 amounted to $2.5 million ($2.7 million in 1964), or $21 per pupil. In an effort to attract more customers, the legislature authorized additional outlets for the sale of sweepstake tickets at turnpike toll stations and at the Sweepstakes Commission office in Concord.

Educational Appropriations. Appropriations for education rose sharply in 1965, with the legislature appropriating $7.3 million more than for the previous biennium. The additional funds went for foundation aid; school construction, including vocational-technical training schools; the University of New Hampshire; educational TV; and a new special education program for handicapped children. The legislature also approved a self-liquidating fund of $500,000 for a new regional center for continuing education at the university. (The university had received an initial grant of $1.5 million for construction of the center from the W.K. Kellogg Foundation.) When it is completed, the center will bring together at Durham the regional and international programs of the six state universities of New England.

New State Commission. New Hampshire's antidiscrimination laws were strengthened during the 1965 legislative session with the establishment of a State Commission on Human Rights, composed of five members appointed by the governor. The commission is empowered to eliminate and prevent discrimination in employment, places of public accommodation, and housing.

Election Law. A significant change was made in the state's election laws by the repeal of the requirement for reporting campaign finances in presidential primaries. The legislature also passed a new apportionment law which allocates seats for the House of Representatives and Senate on the basis of population.

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NEW JERSEY

Amassing the largest plurality ever gained by a New Jersey gubernatorial candidate, Governor Richard J. Hughes won a second four-year term in the November 1965 election. After a bitter campaign, the vote for the governor was more than 350,000 ahead of that tallied by the Republican challenger, state Senator Wayne Dumont, Jr.

Campaign Issues. The major issue in the campaign was the question of academic freedom. This issue grew out of remarks made in April by Dr. Eugene Genovese, an assistant professor of history at Rutgers University at a campus "teach-in" on American policy in Vietnam. Dr. Genovese criticized this policy at the teach-in, prefacing his remarks by saying that he considered himself to be a Marxist and a Socialist, and that he did ". . . not fear or regret the impending Vietcong victory in Vietnam." Instead, he said, "I welcome it."

Both a legislative committee and the university's Board of Governors met to investigate the Genovese case, but found no grounds for dismissing the professor. During the summer and fall, Senator Dumont continued to press the issue and demanded that Governor Hughes take action against Genovese. The governor, however, supported the position of the university's Board of Governors, and accused Dumont of fostering "McCarthyism."

While the candidates differed on a number of other questions—Hughes, for example, favored imposing a personal income tax to meet the state's needs, while Dumont urged a sales tax—the Genovese case remained the major campaign issue and obscured discussion of other state problems.

LEGE
CONGRATULATION FROM
RUTGERS

WIDE WORLD

NEW JERSEY GOVERNOR Richard J. Hughes signals victory to the crowd at his campaign headquarters in Trenton after being reelected on November 2 for a second term. Hughes defeated Republican state Sen. Wayne Dumont, Jr., by a margin of 350,000 votes, and carried Democratic majorities into both houses of the New Jersey Legislature.

Election. Governor Hughes' huge plurality in the election was enough to sweep into office a majority of Democratic candidates for both houses of the state Legislature, as well as many local candidates. Democrats captured 41 of the 60 General Assembly seats, and, with 19 seats out of 29, took control of the state Senate for the first time since 1913. The new Legislature also included the first woman senator, Mrs. Mildred Barry Hughes, and the first Negro senator, Dr. Hutchins F. Inge, in New Jersey history.

Reapportionments. A new apportionment plan contributed to the Democratic victory in the Senate races. The New Jersey Supreme Court found in November 1964 that under existing state constitutional provisions the seating in the Senate violated the U.S. Supreme Court's "one-man, one-vote" ruling.

A commission set up by the Legislature in December 1964 suggested new apportionment plans that combined legislative districts and revised congressional districts. However, the Legislature took no action on these proposals.

Finally, after several hearings before the state Supreme Court, a temporary plan was agreed upon for use only in the 1965 election. The size of the Senate was raised from 21 to 29 seats, with some small counties grouped for representation by a single senator, and with up to four seats allotted to the larger counties. The apportionment of the Assembly was not changed in the temporary plan. The Legislature also authorized the election of representatives to a constitutional convention in March 1966 to draw up amendments for a permanent apportionment plan.

In May the New Jersey Superior Court declared the state's congressional districts to be unconstitutionally drawn, and gave the Legislature until Feb. 21, 1966, to effect a change. A few weeks earlier, the courts also had applied the "one-man, one-vote" criterion to the county governing bodies, the boards of chosen freeholders.

Water Shortage. Another year of drought conditions resulted in water-use restrictions for much of the state, and plans were made for tapping lakes throughout large areas of northern New Jersey. Conflicts with New York City over the allocation of Delaware River water to the two states arose during the summer, but they appeared to be resolved by the end of the year.

Budget and Taxes. In February, Governor Hughes recommended a record budget of $646,829,749 for the fiscal year beginning July 1, 1965, but without new broad-based taxes. Minor cuts by the legislature reduced the governor's proposed budget to $639,597,483.

Following the election, the governor announced his intention to propose a personal income tax to the new Legislature in January. He began a campaign to marshall support for this measure among party leaders.

After three successive postponements, a property-tax reform measure (Chapter 51 of the Laws of 1960) which required all owners of personal property used in business to file local tax returns went into effect for the tax year 1965. By the end of the year, there were demands for the repeal, revision, or replacement of the law.

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NEW JERSEY · Information Highlights

Area: 7,836 square miles.
Population: 6,587,000 (1965 est.).
Chief Cities (1965 est.): Trenton, the capital (107,000); Newark (395,000); Jersey City (270,000); Paterson (144,000); Elizabeth (114,000); Camden (112,000); Clifton (85,000); East Orange (76,500).
Government: *Chief Officers*—governor, Richard J. Hughes (Democrat); secy. of state, Robert J. Burkhardt (D); atty. gen., Arthur J. Sills (D); treas., John H. Kervick; comm. of education, Frederick M. Raubinger; chief justice, Joseph Weintraub. *Legislature*—New Jersey Legislature (convenes Jan. 11, 1966); Senate, 29 members (19 Democrats, 10 Republicans); Assembly, 60 members (41 D, 19 R).
Education: *School enrollment* (1964–65)—public elementary, 829,000 pupils (34,720 teachers); public secondary, 433,000 pupils (22,680 teachers); nonpublic schools, 339,100 pupils (9,210 teachers); college and university (fall 1964), 120,236 students. *Public school expenditures* (1964–65)—$707,000,000 ($607 per pupil); average teacher's salary, $6,698.
Public Finance (fiscal year 1964): *Revenues,* $1,116,878,000 (motor fuel tax, $132,075,000; federal funds, $152,727,000). *Expenditures,* $1,030,215,000 (education, $217,494,000; health, welfare, and safety, $109,997,000; highways, $192,260,000). *State debt,* $524,295,000 (1964).
Personal Income (1964): $20,078,000,000; average annual income per person, $3,005.
Public Assistance (fiscal year 1965): $94,253,000 to 163,664 recipients (aged, $13,907,000; dependent children, $59,486,000).
Labor Force (employed persons, July 1965): *Agricultural,* 54,000; *nonagricultural* (wage and salary earners), 2,253,800 (36.5% manufacturing, 19.5% trade, 12.8% government). *Unemployed persons* (July 1965)—133,300.
Manufacturing (1963): Value added by manufacture, $9,980,065,000 (transportation equipment, $625,400,000; primary metals, $439,473,000; nonelectrical machinery, $671,721,000; electrical machinery, $1,321,585,000; fabricated metals, $681,146,000; food and products, $1,069,728,000; chemicals and allied products, $2,119,670,000; apparel and related products, $482,275,000; stone, clay, and glass products, $388.600,000).
Agriculture (1964): *Cash farm income,* $271,057,000 (livestock, $128,546,000; crops, $138,331,000; govt. payments, $4,180,000). *Chief crops* (tons)—potatoes, 173,000 (ranks 14th among the states); apples, 65,000 (rank, 10th); peaches, 60,000 (rank, 4th); sweet potatoes, 44,400 (rank, 6th); cranberries, 6,800 (rank, 3rd); hay, 351,000; corn for grain, 123,000.
Mining (1964): *Production value,* $78,172,000 (ranks 35th among the states). *Chief minerals* (tons)—zinc, 32,926 (rank, 5th); sand and gravel, 17,661,000; stone, 12,326,000; clays, 500,000.
Fisheries (1964): *Commercial catch,* 139,362,000 pounds ($9,423,000). *Leading species*—menhaden, 64,279,000 pounds ($970,000); soft clams, 36,875,000 pounds ($2,504,000); scup or porgy, 8,551,000 pounds ($847,000); flounder and fluke, 3,670,000 pounds ($865,000).
Transportation: *Roads* (1964), 32,409 miles (27,329 surfaced); *motor vehicles* (1964), 2,821,673; *railroads* (1965), 19 (4,695 miles); *airlines* (1965), 10 (249 airports).
Communications (1965): *Telephones,* 3,557,800; *television stations,* 3; *radio stations,* 61; *newspapers,* 29 (daily circulation, 2,701,521).

NEW MEXICO

The New Mexico Legislature passed reapportionment plans for both its House of Representatives and Senate in 1965. On September 28, however, state voters defeated the reapportionment plan for the Senate and rejected four other proposed constitutional amendments.

Reapportionment. The House reapportioned itself by creating five multiple-county districts and reducing its membership from 77 to 70.

The Senate reapportionment plan provided for five additional senators, all from Bernalillo County. The plan, in the form of an amendment to the state constitution, also provided for a weighted voting system giving each senator a certain percentage of 509 total votes in proportion to the population of his county. Voters rejected the plan on September 28.

Other Legislation. Measures passed by the Legislature included a record $161 million appropriation bill; provisions for the codification of municipal law; pay raises for judicial and county officials; and a requirement that counties establish funds providing hospital care for the needy.

Of eight proposed constitutional amendments passed by the Legislature, three were approved by the voters. These amendments created an intermediate court of limited appeal; permitted school districts to borrow money for remodeling existing buildings, as well as for constructing new ones; and authorized the State Investment Council to invest up to half of the permanent funds in common stock. In addition to the senate reapportionment plan, the defeated amendments called for increased pay for state legislators; the appointment, rather than the election, of the state auditor; permission for decisions by the state engineer to be appealed in district court trials; and repeal of the section of the constitution that requires a convention to change voting requirements. Most counties also decisively defeated tax levies to implement the Indigent Hospital Claims bill.

NEW MEXICO · Information Highlights

Area: 121,666 square miles.
Population: 1,048,000 (1965 est.).
Chief Cities (1965 est.): Santa Fe, the capital (40,000); Albuquerque (242,000); Roswell (50,000); Las Cruces (33,500); Hobbs (28,800); Clovis (28,000); Carlsbad (27,000); Farmington (24,500).
Government: *Chief Officers*—governor, Jack M. Campbell (Democrat); lt. gov., Mack Easley (D); secy. of state, Alberta Miller (D); atty. gen., Boston E. Witt (D); treas., Joseph B. Grant (D); supt. of pub. instr., Leonard DeLayo; chief justice, David W. Carmody. *Legislature*—(convened Jan. 12, 1965): Senate, 32 members (28 Democrats, 4 Republicans); House of Representatives, 77 members (59 D, 18 R).
Education: *School enrollment* (1964–65)—public elementary, 160,533 pupils (5,484 teachers); public secondary, 110,044 pupils (4,472 teachers); nonpublic schools, 31,000 pupils (950 teachers); college and university (fall 1964), 26,159 students. *Public school expenditures* (1964–65)—$115,500,000 ($470 per pupil); average teacher's salary, $6,085.
Public Finance (fiscal year 1965): *Revenues,* $580,764,944 (sales tax, $79,788,174; motor fuel tax, $29,369,525; federal funds, $82,150,472). *Expenditures,* $569,287,849 (education, $119,518,840; health, welfare, and safety, $35,689,009; roads and highways, $83,548,599). *State debt,* $40,819,000 (June 30, 1965).
Personal Income (1964): $2,058,000,000; average annual income per person, $2,041.
Public Assistance (fiscal year 1965): $26,601,000 to 22,360 recipients (aged, $14,105,000; dependent children, $12,221,000).
Labor Force (employed persons, Dec. 31, 1964): *Nonagricultural* (wage and salary earners), 170,029 (10% manufacturing, 33% trade). *Unemployed persons* (Dec. 18, 1964)—7,739.
Manufacturing (1963): Value added by manufacture, $170,453,000: nonelectrical machinery, $6,274,000; fabricated metals, $3,261,000; food and products, $33,971,000.
Agriculture (1964): *Cash farm income,* $262,749,000 (livestock, $148,019,000; crops, $96,006,000; govt. payments, $18,724,000). *Chief crops* (tons)—sorghum grain, 298,600 (ranks 6th among the states); hay, 760,000; cottonseed, 107,000; wheat, 83,200; barley, 36,000.
Mining (1964): *Production value,* $720,124,000 (ranks 7th among the states). *Chief minerals* (tons)—coal, 2,969,000 (rank, 14th); uranium, 2,093,350 (rank, 1st); copper, 86,104 (rank, 4th); zinc, 29,833 (rank, 8th); manganese, 5,794 (rank, 2nd); petroleum, 113,863,000 barrels (rank, 6th).
Transportation: *Roads* (1965), 65,725 miles (10,474 surfaced); *motor vehicles* (1964), 644,795; *railroads* (1965), 2,360 miles; *airlines* (1965), 6 (183 airports).
Communications (1965): *Telephones,* 371,000; *television stations,* 4; *radio stations,* 42; *newspapers,* 19 (daily circulation, 165,599).

Rio Grande Gorge Bridge. The Rio Grande Gorge Bridge, situated 10 miles northwest of Taos, was completed in 1965 and dedicated by Gov. Jack M. Campbell on September 10. The $2 million, 600-foot-high bridge completes a major link in the east-west highway across northern New Mexico.

Agriculture. Above-normal rainfall in 1965 resulted in record yields for most crops except fruit and cotton. Livestock also benefited, although the livestock count was lower than in previous years because many ranchers reduced the size of their herds during the 1964 drought.

Special Projects. In depressed northern counties and on the Navajo reservation, VISTA and Operation Head Start programs were begun in 1965.

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NEW ORLEANS

New Orleans, the largest city in Louisiana (1965 est. pop.: city, 658,050; metropolitan area, 1,029,500) suffered severe damage from hurricane Betsy in 1965.

Hurricane Betsy. On Sept. 9, 1965, the hurricane struck New Orleans. With winds of 130 to 150 mph, accompanied by tides 12 feet above normal, the hurricane inundated a wide area in the eastern part of the city, causing 81 deaths and more than $372 million worth of property damage. About 30,000 persons were left homeless. Several years of work will be required to repair the damage.

Primary Elections and City Government. The Democratic party primary, tantamount to election in New Orleans, was held on Nov. 6, 1965. Incumbent Mayor Victor Schiro was renominated by a majority of 514 votes for another four-year term. Vacant seats on the 7-member City Council were filled as the result of run-off elections held on December 11.

The mayor of New Orleans is assisted by an appointed chief administrative officer, who wields considerable management authority. The City Council is composed of five councilmen elected from districts, and two elected at large. Council members serve four-year terms.

Port of New Orleans. Expenditure of $36.9 million over three years for modernization and construction of New Orleans' port facilities was planned in 1965. The port handled a record 83,496,920 tons of cargo, valued at $2,244,400,000, in 1964—an increase of 20% over the 1963 tonnage. Of the 1964 total, $1,615,300,000 was in exports, which included a record 453,287,000 bushels of grain, and $629,100,000 was in imports.

Industry. The city's shipbuilding industry continued to expand. Avondale Shipyards, with nearly $250 million in construction contracts, now ranks as the largest private builder of subsidized merchant shipping in the United States.

Firms producing rockets for the aerospace industry had a great impact on the city's economy, em-

WIDE WORLD PHOTOS

UPI

HURRICANE BETSY struck New Orleans on September 9 and caused $372 million in property damage. (*Left*) Delacroix Island, east of New Orleans, is inundated. (*Above*) Rescue team helps a family escape from their flooded home.

ploying 12,000 people and having an annual payroll of $90,000,000. In addition, it is estimated that 27,000 other jobs are related to the aerospace industry.

The building industry also continued to expand in 1965, with $500 million being allocated for new plants and industrial expansion in the city area. The total value of building contracts awarded in the first half of 1965 was $148,877,000.

Economy. The civilian labor force in the New Orleans metropolitan area totaled about 391,000 in mid-1965. Of this total, civilian employment was about 374,000; unemployment, 17,000.

Retail sales in the metropolitan area at mid-1965 amounted to $884,074,000.

Finance. The city's finances in 1965 included: operating budget, $41,875,592; adopted capital budget, $1,640,500; long-term general obligation bonded debt, $117,524,000; water revenue bonded debt, $9,564,000; and a special 2-mill tax bonded for sewerage, water, and drainage, $7,195,000.

New Orleans collects a 35-mill tax, of which the city receives 7 mills on 100% assessed property value, and the public school system 13 mills on a 100% base. In addition, 8 mills are for liquidation of the city debt, 4 mills for sewerage and water capital projects, and 3 mills for police and fire benefits.

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NEW YORK

The first Democratic-controlled New York State Legislature in 30 years became embroiled in an intraparty dispute at the opening of the 1965 session, thereby causing a 30-day delay in the legislative process. When work commenced, however, precedent-making legislation was enacted, including a bill virtually outlawing capital punishment. By federal court order, the legislators, elected in November 1964, were required to stand for reelection in November 1965, rather than fill normal two-year terms. The 1965 election, held under a temporary redistricting plan, returned the Republicans to control of an enlarged Senate, but kept the Democratic majority in an enlarged House of Representatives.

Politics. As soon as the 188th Legislature convened on January 6, Democrats found themselves in the midst of a bitter fight over the election of a majority leader for the Senate and a speaker of the Assembly. One faction, led by Mayor Robert F. Wagner of New York City, was supported by J. Raymond Jones, the Manhattan Democratic leader, and legislators from Manhattan and Queens. Their chief antagonist was William H. McKeon, the state party chairman, who had aligned himself with the leaders of the Bronx, Brooklyn, Nassau, and Erie county organizations. Wagner's candidates were Thomas Mackell, a state senator from Queens, for majority leader, and Anthony J. Travia, an assemblyman from Brooklyn, for speaker. McKeon favored Jack E. Bronson of Queens for the Senate leadership and Stanley Steingut of Brooklyn for the speaker's post.

The battle brought forth charges by Mayor Wagner that McKeon had attempted to use bribery to influence their votes when he proposed that two Manhattan state senators receive important committee chairmanships with substantial expense allowances. The accusation of having offered a "double Lulu" (double expense allowance), denied by McKeon, led to an inquiry by State Commission of Investigation, but the commission ended its public hearings on January 29 without reaching a decision.

The impasse over legislative leadership was finally ended on February 3, when Republican senators teamed up with Wagner Democrats and elected Senator Joseph Zaretzki of Manhattan, the former minority leader in the Republican-controlled Senate, as majority leader. On the following day Travia was elected speaker. Their election was considered a victory for Mayor Wagner.

Legislation. On April 14, two weeks after the constitutional deadline, the Legislature passed a record $3.48 billion budget, which was basically the same as that proposed by Governor Nelson A. Rockefeller in his message of January 29. Accompanying the budget were revenue bills imposing a 2% state sales tax, increasing automobile registration fees by 50%, and doubling the state cigarette tax to 10 cents a package.

An historic step was taken on June 1 when Governor Rockefeller signed a bill that eliminated capital punishment except for persons found guilty of killing a police officer acting in the line of duty and for convicts under life sentence who murder a prison guard or an inmate while in jail or attempting to escape. A bill completely revising the state's 84-year old penal law also was enacted, but it was not to become effective until Sept. 1, 1967, to allow time for study. The ban on the dissemination of birth-control devices and information, a statute in the long-standing penal law, was struck down separately and removed from the statute books as of Sept. 1, 1965. Another bill liberalized the definition of legal insanity to bring it into closer accord with modern psychiatric views. The 1965 Legislature adjourned on June 23 after a near-record session of 169 days.

Reapportionment. The problem of compliance with the U.S. Supreme Court "one-man, one-vote" decision of June 1964 in matters of legislative apportionment continued to plague the state in 1965. In January a special three-man federal court, while invalidating three of the four redistricting plans approved the previous month by a lame duck special session of the Republican-controlled 1964 Legislature, upheld Plan A, a straight reapportionment based on 1960 census figures, which enlarged the Senate from 58 to 65 members and the Assembly from 150 to 165.

NEW YORK · Information Highlights

Area: 49,576 square miles.
Population: 17,845,000 (1965 est.).
Chief Cities (1965 est.): Albany, the capital (127,000); New York City (8,080,000); Buffalo (505,000); Rochester (305,000); Syracuse (216,000); Yonkers (206,000); Niagara Falls (101,000); Utica (100,000).
Government: *Chief Officers*—governor, Nelson A. Rockefeller (Republican); lt. gov., Malcolm Wilson (R); secy. of state, John P. Lomenzo (R); atty. gen., Louis J. Lefkowitz (R); treas., Harry O. Harman; comm. of education, James E. Allen, Jr.; chief justice, Charles S. Desmond. *Legislature* (convened Jan. 6, 1965)—Senate, 58 members (34 Democrats, 24 Republicans); House of Representatives, 150 members (88 D, 62 R).
Education: *School enrollment* (1964–65)—public elementary, 1,825,800 pupils (71,600 teachers); public secondary, 1,366,800 pupils (67,200 teachers); nonpublic schools, 959,500 pupils (28,560 teachers); college and university (fall 1964), 536,901 students. *Public school expenditures* (1964–65)—$2,267,000,000 ($790 per pupil); average teacher's salary, $7,800.
Public Finance (fiscal year 1965): *Revenues,* $4,447,917,099 (motor fuel tax, $250,795,828; federal funds, $652,145,949). *Expenditures,* $4,376,082,175 (education, $1,566,000,000; health, welfare, and safety, $1,628,000,000; highways, $513,000,000). *State debt,* $1,082,462,000 (March 31, 1965).
Personal Income (1964): $56,649,000,000; average annual income per person, $3,162.
Public Assistance (fiscal year 1965): $577,643,189 to 737,274 recipients (aged, $63,142,492; dependent children, $279,564,190).
Labor Force (*employed persons,* July 1965): *Agricultural,* not available; *nonagricultural* (wage and salary earners), 6,478,724 (28.1% manufacturing, 20.2% trade, 14.4% government). *Unemployed persons* (July 1965)—395,000.
Manufacturing (1963): Value added by manufacture, $19,510,191,000 (transportation equipment, $1,397,178,000; primary metals, $908,473,000; nonelectrical machinery, $1,516,356,000; electrical machinery, $1,948,630,000; fabricated metals, $844,870,000; food and products, $1,845,385,000).
Agriculture (1964): *Cash farm income,* $921,677,000 (livestock, $613,929,000; crops, $288,811,000; govt. payments, $18,937,000). *Chief crops* (tons)—hay, 3,291,000 (ranks 16th among the states); alfalfa, 2,390,000 (rank, 11th); potatoes, 917,500 (rank, 4th); apples, 540,000 (rank, 2nd); oats, 468,000 (rank, 9th); grapes, 120,000 (rank, 2nd).
Mining (1964): *Production value,* $288,445,000 (ranks 18th among the states). *Chief minerals* (tons)—sand and gravel, 39,282,000 (rank, 3d); salt, 4,816,000 (rank, 3rd); gypsum, 653,000 (rank, 7th); zinc, 60,754 (rank, 2nd).
Fisheries (1964): *Commercial catch,* 79,157,617 pounds ($9,884,035). *Leading species*—menhaden, 42,424,700 pounds ($516,226); scup or porgy, 8,343,820 pounds ($783,648); hard clams, 5,402,292 pounds ($4,135,545); sea scallops, 2,044,332 pounds ($1,114,682).
Transportation: *Roads* (1965), 101,787 miles (92,687 paved); *motor vehicles* (1964), 5,969,221; *railroads* (1964), 7,764 miles; *airlines* (1965), 35 (351 airports).
Communications: (1965): *Telephones,* 10,097,000; *television stations,* 31; *radio stations,* 219; *newspapers,* 107.

In March, New York Supreme Court Justice Nathan Levy rejected all four plans as violative of the state constitution. His decision was upheld on April 15 by the New York Court of Appeals. The Democrats then set forth a plan that transferred the voting strength of upstate communities to New York City's suburbs, but failed to get it through the Legislature.

On May 24, a federal court again ruled in favor of Republican Plan A and ordered a special legislative election to be held on November 2, stipulating that legislators serve one-year terms and that another election be held in November 1966 under a permanent apportionment law. The U.S. Supreme Court upheld this decision on June 1, and dismissed all appeals to stay the 1965 election on October 11. Reapportionment was to be the first order of business for the 1966 Legislature as the New York Supreme Court had set Feb. 1, 1966, as the deadline date for submitting a new redistricting plan.

Elections. In the November 2 election, the Democrats lost control of the state Senate, capturing 28 seats to the Republican's 37. They retained their majority in the Assembly, gaining 90 of the 165 seats. In the only statewide contest, former U.S. Senator Kenneth Keating, a Republican, was elected to the Court of Appeals, defeating Democrat Owen McGivern by a vote of 1,972,496 to 1,327,101.

Voters approved five amendments to the state constitution, a proposal to hold a constitutional convention in 1967, and a $1 billion bond issue to help communities build antipollution facilities. They rejected two propositions intended to bolster the New York City low-income housing program and four proposed amendments, including one which would have increased legislative terms from two to four years.

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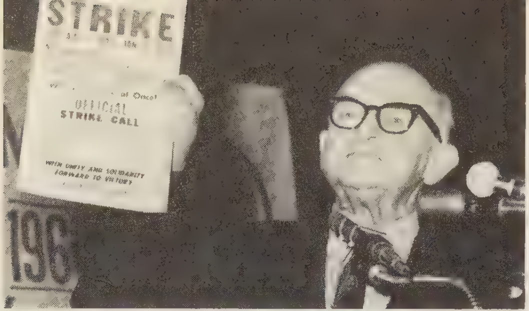
NEW YORK CITY

The two most dramatic events of 1965 in New York City took place one week apart. On November 2 a long, hard-fought mayoralty election campaign culminated in the upset victory of the Republican-Liberal candidate, John V. Lindsay. On the night of November 9–10, a spectacular electrical "blackout" temporarily paralyzed the city.

Elections. John Lindsay's stunning victory in the mayoralty race was the first for a Republican since that of Fiorello La Guardia, who served as mayor from 1933 to 1945. A New York congressman, Lindsay initially announced he would not be a candidate, but on May 13 he reversed his stand, and two weeks later was officially given the Republican nomination. On June 28 he received an overwhelming endorsement from the Liberal party. Shortly thereafter, Timothy W. Costello, the Liberal party state chairman, was chosen as candidate for the presidency of the City Council on Lindsay's slate. On July 19, Milton Mollen, a Democrat, bolted his party to join ranks with Lindsay as candidate for comptroller.

On June 10, Mayor Robert F. Wagner, a Democrat, announced that he would not seek a fourth term. This announcement set off a four-way contest



UPI

NEW YORK TRANSIT STRIKE, called by union chief Michael Quill (*above*), badly disrupted city in January 1966.

for his party's mayoral nomination. The contenders were Comptroller Abraham D. Beame, City Council President Paul R. Screvane, Congressman William Fitz Ryan, and Councilman Paul O'Dwyer. Although Screvane had Mayor Wagner's backing, Beame defeated him in the Democratic primary election on September 14. Also victorious in the primary were Beame's running mates: Queens District Attorney Frank D. O'Connor, who became the Democratic candidate for City Council president, and Judge Mario A. Procaccino, the candidate for comptroller.

A third figure, William F. Buckley, entered the mayoralty race early in the summer as the Conservative party candidate. The campaign centered around the issues of bossism and experience. Lindsay characterized Beame as a dupe of Democratic party bosses; Beame stood on his record of experience in municipal government; and Buckley attacked Lindsay's liberal Republican record.

ELECTRICAL BLACKOUT on the night of Nov. 9, 1965, left commuters stranded in New York's Pennsylvania Station.

UPI

JEWELRY NATIONAL

The results of the November 2 election showed extensive ticket splitting. In a traditionally Democratic city, the voters elected Lindsay by a vote of 1,156,915 to Beame's 1,030,771. However, Procaccino defeated Mollen for comptroller by a vote of 1,195,424 to 1,003,577, and O'Connor defeated Costello for City Council president by a vote of 1,366,260 to 939,470. Buckley ran ahead of his ticket, garnering 339,137 votes. The electorate returned 30 Democrats and 7 Republicans to the City Council.

The Blackout. The regional power failure that affected 30 million people in nine northeastern states and two Canadian provinces on November 9 hit New York City the hardest. Electric clocks in the city stopped at 5:27 P.M., and power was not restored in some neighborhoods until more than 13 hours later. Some 800,000 riders were trapped in subways at the height of the rush hour, and thousands of others had to be rescued from elevators. Fortunately, New Yorkers' spirits remained high, and the only major casualty was the business community, which suffered a trade loss of $100 million.

Water Conservation. A four-year drought in the New York watershed became a major concern of New Yorkers during the spring and summer of 1965. In April the city's water-storage levels stood at 48% of capacity, compared with a normal level of 75–80%. By mid-September the level had fallen to 38%. Mayor Wagner ordered restrictions on the use of water, and the public was urged to minimize water consumption and eliminate waste. A program of inspection and repair of water fixtures and aqueducts was initiated. In addition, steps were taken to reopen pumping stations on the Hudson River and to purchase private water. Although the problem remained at year's end, the immediate crisis had been weathered. (See also WATER SUPPLY.)

After years of discussion, the city's water supply was fluoridated beginning September 30.

Strikes. Labor unrest continued to be part of the New York scene. Early in the year, Welfare Department employees went on strike, demanding reduced case loads and higher salaries. On January 31, after a 28-day walkout, union and city officials accepted a four-point program, which included a provision for a five-man fact-finding panel with authority to settle wages and working conditions.

New Yorkers were without most of their daily newspapers for a 25-day period from September 16 to October 10. When the *Times* was struck by the American Newspaper Guild, five other newspapers that are members of the Publishers' Association of New York City closed voluntarily. The dispute, centering on automation, pensions, severance pay, and the extension of the union shop, was settled after prolonged negotiations led by special mediator Theodore W. Kheel. (See also NEWSPAPERS.)

At the year's end, Michael J. Quill, president of the Transport Workers Union, having failed to solve a wage dispute during contract negotiations with the city's Transit Authority, called a crippling subway and bus strike. Despite an antistrike injunction issued by the State Supreme Court, public transportation ground to a halt at 5 A.M. on Jan. 1, 1966, and did not resume until January 13, when the union accepted a compromise packet amounting to $50–70 million. During the 12-day strike, a monumental traffic jam choked the city. Business and wage losses were estimated at $1 billion.

JOHN VLIET LINDSAY is the first Republican to win a mayoralty election in New York City in 24 years. Campaigning on a nonpartisan "fusion" ticket, Lindsay overcame the Democratic registration advantage of 3½ to 1, to defeat the Democratic candidate, Abraham Beame by a 126,144-vote margin on Nov. 2, 1965. Lindsay, a handsome, youthful congressman from New York's 17th District, conducted an energetic campaign to convince the voters that he was "fresh while everyone else is tired" and that he could make "our city great again."

Lindsay was born in Manhattan on Nov. 24, 1921. He was graduated from Yale University in 1943 and Yale Law School in 1948. During World War II, he served in the Navy and was awarded five battle stars. After practicing law in New York, he won election to Congress from the so-called Silk Stocking district.

(Photo at right) Mayor Lindsay is sworn in on Dec. 31, 1965, following his upset election victory in New York.

UPI

Education. Administrative personnel created problems on the educational scene. Dr. Calvin E. Gross, the superintendent of schools, was placed on an involuntary three-month leave of absence by the Board of Education in March 1965, and in June he announced his resignation, effective August 31. He was replaced by Bernard E. Donovan. James B. Donovan, president of the board, announced his resignation effective June 30; he was succeeded by Lloyd K. Garrison. The chancellor and the academic dean of the city university and the presidents of Brooklyn and Hunter colleges announced either their resignations or retirement on November 20, after a controversy with the Board of Higher Education over a proposed tuition plan for the municipal colleges, but the chancellor and dean returned to their posts in mid-December.

A teachers' strike, scheduled for September 13, the first day of school, was averted on September 10, when the United Federation of Teachers agreed to a salary increase offered by the Board of Education.

Poverty Programs. The war on poverty was continued in New York through activities of Mobilization For Youth (MFY) and Haryou-Act. In March, Mayor Wagner outlined a joint municipal-federal program to build 22 centers to help the jobless and the needy. In June the federal government allocated about $13.5 million to the city to implement antipoverty plans. (See also ANTI-POVERTY PROGRAM.)

Law Enforcement. A reported 52.5% increase in major crime in the subways during 1964 caused alarm and led to intensive police patrolling of the subway system beginning in May 1965. In late October, Mayor Wagner reported a 63% decrease in felonies committed at night in the subways.

Civil rights organizations demanded the creation of a civilian review board to deal with cases of alleged police brutality. On May 18, after a subcommittee of the City Council recommended the creation of such a board, Police Commissioner Michael J. Murphy resigned. His successor, Vincent L. Broderick, also opposed the plan.

Economy. During the second quarter of 1965, employment rose by 2%, to 3,578,000, as compared with the same period of 1964; unemployment declined by 7.3%, to 213,000. During the same period, the consumer price index rose 1.5%, to reach 111.9 (1957–59 = 100). Reflecting the upward trend, a record city expense budget of $3,875,000 was passed on June 8, 1965. The total sales tax in the city was increased from 4 to 5% on August 2, with 2% going to the state.

World's Fair Ends. More than 50 million people had visited the New York World's Fair before its two-year run ended on October 17. Among the visitors to the fair was Pope Paul VI, who, on a one-day visit to the city on October 4, addressed the UN General Assembly, conferred with President Johnson, and celebrated Mass for 90,000 people at Yankee Stadium. (See also NEW YORK WORLD'S FAIR 1964/1965; RELIGION.)

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HELICOPTER SERVICE between the Pan Am Building in mid-Manhattan and Kennedy Airport began on Dec. 21, 1965.

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WORLD'S FAIR reopening, April 21, was attended by (l. to r.) Berlin Mayor Willy Brandt, Fair Corporation President Robert Moses, Vice President Hubert Humphrey, Chief Justice Earl Warren, and New York Mayor Robert F. Wagner.

NEW YORK WORLD'S FAIR 1964/1965

The New York World's Fair, held at Flushing Meadow Park in New York City, was a popular success but a financial failure. A record total of 51,607,037 persons paid admission during the fair's two six-month seasons in 1964 and 1965, but holders of the fair corporation's notes got back only about 39 cents on each dollar of the $30 million they invested. However, it was estimated that the fair drew an added 3.75 million visitors to New York City during the two seasons, and that they spent $750 million.

Finances and Attendance. The second season began on April 21, 1965, in an atmosphere of unease. It was public knowledge that the fair's finances were shaky, and critics charged mismanagement. The president of the fair corporation, Robert Moses, had opposed an audit by New York City officials. An effort to remove Moses from his post had failed.

WIDE WORLD

LAST DAY OF FAIR, October 17, drew a crowd of 446,953 persons. Unisphere is in the foreground.

AFTER FAIR CLOSED, Michelangelo's masterpiece, the *Pietà*, was placed on Italian liner for return trip to Rome.

WIDE WORLD

C. COLOMBO
PIETA
POPE PAUL VI
WITH GRATITUDE

Drastic measures were taken. A sharp reduction in security forces brought protests from some exhibitors and from some visitors seeking directions or other assistance. An increase in adult admission, from $2.00 to $2.50, angered concessionaires, but Moses was adamant and had the backing of the fair corporation's executive committee. Attendance for the 1965 season was down 10% from 1964 (24.5 million vs. 27 million).

Furthermore, the attendance fluctuated wildly during 1965. It was so low during the first two months of the season that fair personnel seemed resigned to having a "flop." Then people began to come in increasing numbers, to make the summer a success by most standards. A post-Labor Day slump continued until the final two weeks. But then attendance picked up, and during the last eight days, more than 10% of the season's visitors went through the gates. On the final Sunday (October 17) a record total of 446,953 persons were admitted.

General Motors, with its Futurama, attracted the most people—29,002,186 for the two seasons. Second in attendance, with 27,020,857, was the Vatican pavilion. Its principal attraction was Michelangelo's *Pietà*, but the pavilion itself was among the most beautiful on the fairgrounds. The New York State pavilion drew 24,707,204. This pavilion had a colorful design that gave it the appearance of a circus "big top"; from its observation towers, visitors had a magnificent view of the fair. Other attendance leaders were, in order, Chrysler, General Electric, Ford, Florida, Bell System, United States, IBM, Du Pont, and Johnson's Wax. Johnson's Wax, which could accommodate only 500 persons every 20 minutes to see its beautiful motion picture, *To Be Alive*, was obliged to turn away thousands of visitors.

The 1965 Season. Much of the fair was new in 1965. At an exhibit sponsored by the People-to-People organization, a striking collection of photographs, paintings, and other memorabilia recalled the career of Sir Winston Churchill. The United States pavilion exhibited the Bill of Rights, the Emancipation Proclamation, and other historic documents, along with mementos of 13 presidents. The Belgian Village, a late opener in 1964, was a big hit in 1965, as were the new exhibits at the U.S. Space Park. On October 4, Pope Paul VI visited the Vatican pavilion after his trip to the United Nations.

The last two days of the fair presented a sorry spectacle. Vandals defaced buildings and smashed what they could not carry off. Flower beds were destroyed; saltshakers, silverware, and china were stolen as souvenirs, and trash cans were overturned.

Dismantling the Fair. The fair corporation's lease with the city required that everything be removed so that the area could be restored as a public park. Exhibitors sought to sell as much as possible to cut down transportation or demolition costs. Purchases by bargain hunters ranged from cheap dolls to the Austrian pavilion, which was sold as a ski lodge for $3,000. (It cost $300,000 to ship it to Jamestown, N.Y., and rebuild it.)

Most pavilions were reduced to rubble. One exception was the triple-towered Mormon pavilion, a reproduction of a portion of the Mormon Temple in Salt Lake City, which was dismantled and moved to Plainview, N.Y., where it was to become a Mormon chapel. (See also ST. LOUIS.)

Several structures will be retained at the site of the fair in Flushing Meadow Park. They are the Hall of Science, the Port of New York Authority heliport, the Unisphere, the New York City building, the amphitheater on Meadow Lake, Singer Bowl, and the United States pavilion.

RALPH CHAPMAN
Editorial Staff, New York Herald Tribune

NEW ZEALAND

New Zealand followed the example of the United States and Australia in 1965 by sending combat troops to help the government of South Vietnam in its struggle against the Vietcong guerrillas. On the economic front, New Zealand signed an important trade agreement with Australia, and acted to reduce inflationary pressures within its economy.

Aid to South Vietnam. The prime minister, Keith Holyoake, announced in May that in response to a request from the government of South Vietnam, New Zealand would send a combat unit of 120 men to fight in that country. The unit chosen was an artillery battery equipped with 105-mm. howitzers.

NEW ZEALAND · Information Highlights

Area: 103,736 square miles.
Population: 2,641,000 (March 31, 1965 est.).
Chief Cities (1964 est.): Wellington, the capital, 125,900; Christchurch, 156,900; Auckland, 147,900.
Government: *Sovereign*—Queen Elizabeth II of Britain; *Governor General*—Sir Bernard Fergusson; *Prime Minister*—Keith J. Holyoake; *House of Representatives* (80 members); party seating (1965)—National (45), Labour (35).
Religious Faiths: Anglicans, 35% of population; Presbyterians, 22%; Roman Catholics, 15%.
Education: *Total school enrollment* (1963)—638,947 (primary, 442,985; secondary and technical, 152,237; higher, 43,725).
Finance (1964): *Revenues,* $1,173,400,000; *expenditures,* $1,401,100,000; *public debt,* $2,807,500,000; *monetary unit,* New Zealand pound (0.3597 pound equals U.S.$1).
Gross National Product (1964): $2,866,200,000.
National Income (1964): $2,465,900,000; average annual income per person, $952.
Economic Indexes: *Manufacturing* (1962), 125 (1958=100); *agricultural production* (1964), 130 (1956–57=100); *cost of living* (1964), 115 (1958=100).
Manufacturing (metric tons, 1964): Meat, 838,800; cement, 788,000; butter, 231,600; wheat flour, 208,800; wool yarn (1962), 5,300; tobacco (1963), 2,144.
Crops (metric tons, 1963–64 crop year): Wool, 279,400 (ranks 3rd among world producers); wheat, 271,000; potatoes, 247,000; barley, 103,000; oats, 24,000; linseed, 11,000; tobacco (1964–65), 4,100; hard fibers, 4,000.
Minerals (metric tons, 1964): Coal (1963), 672,000; salt, 22,000; pumice, 20,847; iron ore (1963), 3,123; diatomite, 1,600; crude petroleum (1963), 4,000 barrels.
Foreign Trade (1964): *Exports,* $1,074,000,000 (chief exports: wool, $369,200,000; lamb and mutton, $169,600,000; butter, $161,800,000); *imports,* $961,000,000 (chief imports, 1963): nonelectrical machinery, $115,600,000; petroleum products, $76,400,000; iron and steel, $75,300,000). *Chief trading partners* (1963): Great Britain (took 46% of exports, supplied 35% of imports); U.S. (took 17% of exports, supplied 9% of imports); Australia (took 5% of exports, supplied 21% of imports).
Transportation: *Roads* (1964), 57,439 miles (19,264 paved); *motor vehicles* (1964), 877,029 (automobiles, 649,150); *railways* (1963), 3,263 miles; *merchant vessels* (1964), 61 (212,000 gross registered tons); *national airline,* New Zealand National Airways; *principal airports*—Auckland, Christchurch, Wellington.
Communications: *Telephones* (1964): 901,955; *television stations* (1964), 8; *television sets* (1964), 147,000; *radios* (1963), 616,000; *newspapers* (1963), 41 (daily circulation, 1,018,000).

The prime minister's announcement touched off a national debate over New Zealand's proper attitude toward the Vietnam conflict. The Labour Party, which forms the opposition to the government in parliament, opposed sending troops to Vietnam except as a part of a peace-keeping force. The New Zealand troops arrived in Vietnam in July.

Free Trade Agreement. In August the New Zealand and Australian governments reached agreement on the terms of a trade pact which will establish a limited free trade area between the two countries. New Zealand's minister for overseas trade, John R. Marshall, said that the agreement (to take effect in January 1966) will cover 60% of the trade between Australia and New Zealand, including 85% of New Zealand's exports to Australia. It was expected that under the agreement New Zealand will be able to increase its exports to Australia in a number of commodities, especially forest products. Critics suggested that secondary industry in New Zealand will suffer from Australian competition, but the government stated that adequate safeguards for New

UPI

NEW ZEALAND COMBAT UNIT IN VIETNAM is reviewed by Ambassador Stephen Weir and Brig. Gen. Linh Quan Vien of South Vietnam army. Artillery battery arrived in July.

Zealand's industry are included in the pact.

Economy. The year 1965 was prosperous in New Zealand. Exports and imports were at record levels. Profits, salaries and wages, and farm income all rose. National income increased by 6.2% in the year ending March 31, 1965, and continued to rise during the rest of 1965.

Nevertheless, New Zealand faced some troublesome economic problems in 1965, especially inflation and balance of payments difficulties. In March, consumer prices were 4.3% higher than they had been a year previously and were still rising. Labor shortages and a rapid growth in the number of building permits issued were other indications of inflationary pressure. A high level of imports created a substantial deficit in New Zealand's balance of payments abroad and threatened to reduce foreign exchange reserves to the 1938 level.

The government acted to cope with these problems. Under new regulations for the construction industry, large building projects could be postponed for up to 18 months. Government spending on nonessential capital projects was also delayed. However, the government preferred not to impose tighter controls on imports, and in July it added 90 items to the commodities not subjected to import controls.

Hydroelectric Power. Two major steps to develop New Zealand's hydroelectric power resources were taken in 1965. The largest dam in New Zealand was opened at Benmore, in the South Island, and began producing electric power. At the same time the interisland transmission cable went into operation.

Armed Forces. The New Zealand government took steps in 1965 to increase the efficiency of the armed forces. A new frigate for the navy was ordered in February, three Hercules transport aircraft were delivered in April, and five Orion antisubmarine aircraft and some helicopters ordered.

Cook Islands Dependency. In April the first elections were held under the Cook Islands new constitution, which gives the territory internal self-government. A six-man team of UN observers verified that the elections were democratically organized. The Cook Islands party, led by Albert Henry, won a victory at the polls.

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NEWFOUNDLAND

The major developments of concern to the government of Newfoundland and Labrador during 1965 were hydroelectric power, industrial expansion, royal commissions, and Come Home Year activities.

Economy. Negotiations continued with the Province of Quebec over transmitting hydroelectric power to be developed in Labrador through Quebec. Meanwhile, construction was begun on the Bay d'Espoir power development on the Salmon River. This $80.7 million project will generate 600,000 horsepower to be fed by grid lines to industrial and commercial users across Newfoundland.

NEWFOUNDLAND · Information Highlights

Area: 156,185 square miles (including Labrador).
Population: (Oct. 1, 1965, est.): 501,000.
Chief Cities (1961 census): St. John's, the capital (63,633); Corner Brook (25,185).
Government: *Chief Officers*—Lt. gov., Fabian O'Dea; premier and min. of econ. develop., Joseph R. Smallwood (Liberal party); min. of prov. aff., J.T. Cheeseman (L); atty. gen., Leslie R. Curtis (L); min. of finance, E.S. Spencer (L); min. of educ., G.A. Frecker (L); chief justice, R.S. Furlong. *Legislature*—Legislative Assembly (convened Jan. 27, 1965), 42 members (34 Liberal, 7 Progressive Conservative, 1 independent).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 141,808 pupils (5,085 teachers); private, 140 (12); college and university (1962–63), 1,998 students. *Public school expenditures* (1963)—$23,935,000; average teacher's salary, $2,935.
Public Finance (fiscal year 1965 est.): *Revenues*, $89,660,000 (sales tax, $28,025,000; income tax, $8,863,000; federal funds, $38,969,000). *Expenditures*, $102,200,000 (education, $26,370,000; health and welfare, $25,680,000; transportation and communications, $24,200,000).
Personal Income (1964): $523,000,000; average annual income per person, $1,061.
Public Assistance (fiscal year 1965 est.): $10,750,000 (aged and blind, $2,480,000; dependents and unemployed, $5,640,000).
Labor Force (1961 census, agricultural and manufacturing only): Agricultural, 1,694; manufacturing, 10,114.
Manufacturing (1962): Value added by manufacture, $75,508,000 (including fabricated metals, $1,072,000; food and products, $21,521,000).
Mining (1964 est.): *Production value*, $191,922,042. *Chief minerals* (tons)—iron ore, 13,094,240 (ranks 2nd among the provinces); zinc, 41,498 (rank, 6th); copper, 14,505 (rank, 6th); asbestos, 50,281 (rank, 4th); lead, 24,368 (rank, 2nd); sand and gravel, 3,930,010 (rank, 8th).
Fisheries (1964): *Commercial catch*, 579,126,000 pounds ($20,530,000). *Leading species*—cod, 365,108,000 pounds ($12,390,000); lobster, 4,510,000 ($2,129,000); flounders and sole, 72,200,000 ($2,114,000); redfish, 40,397,000 ($1,055,000).
Transportation: *Roads* (1962), 7,291 miles (4,275 surfaced); *motor vehicles* (1963), 79,422; *railroads* (1963), 934 miles; *airlines* (1963), 2 (5 airports).
Communications (1963): *Telephones*, 74,099; *television stations*, 3; *radio stations*, 11; *newspapers*, 3 (daily circulation, 29,949 in September 1964).

Through extensive advertising in European and American publications, the Newfoundland government invited industrial firms which are large consumers of electricity to relocate in the province. As a result of this effort, a $3.6 million steel mill, financed by Newfoundland and Ontario investors, will be built near St. John's. The plant, using scrap steel, will have an initial annual production of 60,000 tons of construction and reinforcement steel.

It was announced during the year that the province's third pulp and paper mill will be built at the town of Come by Chance, 65 miles northwest of St. John's. Estimated to cost $50 million, the mill will turn out 100,000 tons of newsprint and 75,000 tons of pulp annually.

Royal Commissions. Five royal commissions were set up early in 1965 to study various aspects of Newfoundland life. The areas to be reviewed by the commissions are transportation, electric power, health, education, and economic developments.

Come Home Year. Preparations were under way for Newfoundland's Come Home Year, which is to be celebrated in 1966. The section of the Trans-Canada Highway crossing the province is scheduled for completion in time to accommodate the expected influx of tourists, and Newfoundland's hotel facilities were being expanded.

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Provincial Archivist and Curator of the
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The debate over the relationship between a free press and a fair trial, and the strain caused by automation on newspaper labor-management relations held the attention of newspapermen in 1965.

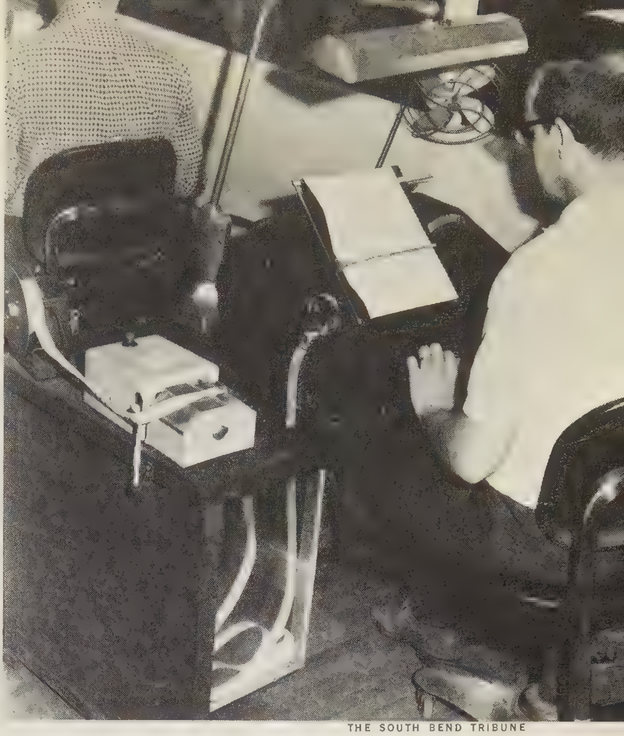
Free Press-Fair Trial Controversy. In its report in 1964 on the assassination of President Kennedy, the Warren Commission asserted that the press was in part responsible for "groundless rumors and public confusion" during the dark days in Dallas. Lawyers and jurists took up this refrain, and criticized the coverage of crime news in general. Many newsmen were equally concerned about the clash between two fundamental American rights: the right of a free press and the right of the accused to a fair trial. Was the press "over-reporting" criminal cases, standing in the way of justice, and prejudicing public opinion against persons accused of crimes but not yet convicted?

Many persons thought so. In 1965, Senator Wayne Morse of Oregon revived his bill to restrict the release of information in criminal cases. Bar associations in Philadelphia and elsewhere drafted guidelines for the courts and the press. High courts in several states banned statements to the press by police, lawyers, or court officials. Some newspapers directed their reporters to be more circumspect in pre-trial coverage. Although the Illinois Supreme Court held that newspaper publicity had not prejudiced a trial of five Chicago policemen, the U.S. Supreme Court in June 1965 threw out the conviction of Texas financier Billie Sol Estes for swindling, because segments of his trial had been televised.

In April 1965, Attorney General Nicholas Katzenbach addressed the American Society of Newspaper Editors (ASNE). With respect to pre-trial information, he said that his department would supply general background data on a defendant, the substance or text of the charge, the identity of the agencies involved, and the circumstances of the arrest. But he said that the government should be circumspect in disclosing a criminal's past record, and would not report any confession made by the criminal, or the results of fingerprint, polygraph, or ballistic tests. Although the attorney general said that his department would not attempt to regulate the content or the conduct of the press, he criticized attempts by police and prosecutors to try cases in the press.

The directors of the ASNE rejected the Warren Commission's proposal that the press adopt a code of conduct to protect accused persons. A committee of editors defended the press coverage of President Kennedy's assassination as accurate and complete.

Automation. Newspaper managers and workers were preoccupied with the economics of publishing, and automation was a point of conflict between them. Computerized production continued to grow, and was the major issue in a 25-day strike (September 16–October 10) by the Newspaper Guild against the New York *Times,* where workers sought protection against elimination of jobs through automation. Publishers of six other dailies in the New York area suspended publication in sympathy with the *Times.* A federal mediator helped settle the strike, with the *Times* agreeing to administer a pension plan jointly with the guild, to require all workers in departments under guild jurisdiction (except those in news and editorial positions) to join the guild, and to protect the jurisdiction of the guild. As in many other recent disputes, the automation issue was not settled, only postponed.



THE SOUTH BEND TRIBUNE

AUTOMATION of newspapers continued in 1965. Here, an operator transfers copy to perforated tape—the first step in producing type by means of an electronic computer.

Other strikes in 1965 included a five-week walkout and lockout in Baltimore. The disputes within the newspaper industry bared growing friction within the ranks of both labor and management.

Circulation, Failures, and Mergers. The year 1965 began with 1,763 daily newspapers in the United States, having a circulation of 60,412,266 copies. In 1964 the number of dailies increased by nine, and circulation topped 60 million for the first time. The circulation gain (from 58,905,251 in 1963) was the largest for any year since 1946, and was particularly marked in the smaller cities. Small papers often showed more vigor than their metropolitan counterparts. In October 1965 a new daily, *The Connecticut Valley Times*, published in Springfield, Vt., appeared, while in Indianapolis the 78-year-old *Times,* a Scripps-Howard property, failed and abandoned some 90,000 subscribers. Two struggling one-year-olds, the Vancouver (B.C.) *Times* and the Atlanta *Times,* closed in 1965. The Latin American *Times* began publication in New York City during the summer, but closed again in the fall.

Mergers seemed to offer hope in some cities. In September, three dailies in San Francisco (the *Chronicle* and two owned by Hearst) agreed to share the market with one morning, one afternoon, and one Sunday paper. All were produced by a single new corporation, but they remained editorially independent.

The Department of Justice kept an eye on mergers and chain purchases. Antitrust actions were pending against the Scripps-Howard chain because of its purchase of the Cincinnati *Enquirer;* the Hoiles chain for monopolizing properties in Lima, Ohio; the two dailies in Tucson, Ariz., because of an attempted merger; and the Times-Mirror Company of Los Angeles after it purchased publishing properties in San Bernardino in 1964.

Florida was a promised land for newspaper investors in 1965. Newspaper properties in that state were bought by the Chicago *Tribune* (Orlando), the Scripps-Howard interests (Hollywood), the Lindsay-Schaub chain (Venice), and the Gannett chain (Cocoa and Titusville). Also the John S. Knight newspapers bought the Tallahassee *Democrat*. Elsewhere, the Minneapolis *Star* and *Tribune* purchased the Rapid City (S. Dak.) *Journal*.

Makeup Innovations. Innovations in newspaper makeup appeared. The *Christian Science Monitor*, in adopting a new five-column format, increased the size of its body type and dropped column rules. The Louisville *Courier-Journal* and *Times*, the Riverside (Calif.) *Press* and *Enterprise*, the Dallas *Morning News*, and the Rock Hill (S.C.) *Evening Herald* dropped the traditional column format.

Prizes. For typographical excellence, the Bennington (Vt.) *Banner* won the Ayer Cup in 1965, and, in Canada, the Hamilton (Ont.) *Spectator* and the Kingston (Ont.) *Whig-Standard* won the McLaren awards. For a campaign on legislative reapportionment, the Hutchinson (Kans.) *News* won the Pulitzer Prize for meritorious public service. (See also PRIZES AND AWARDS.)

Appointment. President Johnson named Bill Moyers his press secretary, succeeding George Reedy.

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NICARAGUA

N. AMERICA
S. AMERICA

The Republic of Nicaragua enjoyed a generally calm and prosperous year in 1965. Premature political campaigning for the 1967 presidential elections presented the only seriously disruptive note, as it tended to generate tensions and create a climate for possible future violence.

Politics. The reason for heated political activity so far in advance of the election was that the leader—and probable presidential candidate—of the governing Liberal party, Maj. Gen. Anastasio Somoza Debayle, is the younger son of Gen. Anastasio Somoza Garcia, who was a virtual dictator of Nicaragua from 1937 until his assassination in 1956. Many Nicaraguans contend that a "Somoza dictatorship" still exists behind the government of President René Schick Gutiérrez. They are loathe to see the armed forces chief assume the presidency.

As the Liberal party candidate, General Somoza would have an automatic lead, but Dr. Fernando Agüero Rocha, leader of the opposition Conservative party, already was campaigning strongly and confidently. Dr. Agüero had the support of Pedro Joaquín Chamorro, editor of the influential Managua daily, *La Prensa*. The opposition hoped to organize a coalition or "Patriotic Alliance" of all dissident parties and independents.

Economy. Intensified economic growth continued for the fifth straight year, with an anticipated 8% expansion in the real domestic product in 1965. Cotton production rose to about 543,000 bales at the end of the 1964–65 crop year in June. However, a severe drought and heavy winds from May to September caused serious losses and harmed the 1965–66 cotton crop. Coffee production increased, and by August the quota under the International Coffee Agreement was raised by 63,000,000 bags.

At least 19 new industrial mills, financed with ample national and foreign loans, were under way—evidence of an increasing diversification of production and location. The Planta Centroamérica hydroelectric project on the Tuma River began production in March, and a 20% reduction on household electric rates was announced in April.

Foreign Affairs. Nicaragua maintained its policy of outspoken opposition to Cuban dictator Fidel Castro. In August the government denounced Castroite subversion and stated that it anticipated no resumption of relations with Cuba. Nevertheless, the anti-Castro Revolutionary Recovery Movement closed its hit-and-run training center in Nicaragua in March, reportedly to concentrate on activities within Cuba.

On May 6, at the Organization of American States (OAS) ministerial meeting, Nicaragua voted for the creation of an Inter-American Peace Force to serve in the Dominican Republic. Within a few days about 175 Nicaraguan troops were sent to join the force.

Canal. Although the National Assembly had voted in 1964 to abrogate the 1916 Bryan-Chamorro Treaty, which gave the United States perpetual rights to build and operate a Nicaraguan canal, Nicaragua retained its interest in the construction of a sea-level canal under a revised treaty. Officials from the United States visited Nicaragua and other Central American countries having possible canal sites in late January and February 1965.

Conflicting claims faced Nicaragua on both sides of the possible canal route. El Salvador and Honduras claim condominium rights in any western ter-

NICARAGUA · Information Highlights

Area: 53,938 square miles.
Population: 1,626,000 (Dec. 31, 1964 est.).
Chief Cities (1963 census): Managua, the capital, 234,580; León, 44,053; Granada, 28,507; Masaya, 23,402.
Government: *President*—René Schick Gutiérrez (took office May 1, 1963). *Parliament* (National Assembly)—Chamber of Deputies, 54 members (party seating, 1965: Liberals, 36; Conservatives, 18); Senate, 21 members (party seating, 1965: Liberals, 13; Conservatives, 8).
Religious Faiths: Roman Catholics, 94% of population.
Education: *Literacy rate* (1963)—50% of population aged 15 and over. *Total school enrollment* (1961–62)—190,370 (preschool and primary, 175,505; secondary, 7,778; teacher-training, 2,110; technical, 2,908; university/higher, 2,069).
Finance (1963–64): *Revenues*, $22,900,000; *expenditures*, $22,900,000; *monetary unit*, córdoba (7 córdobas equal U.S.$1).
Gross National Product (1964): $486,000,000.
Manufacturing (metric tons, 1964): Sugar, 109,000; cement, 61,000; beer (1962), 5,660.
Crops (metric tons, 1964–65 crop year): Cottonseed, 238,000; cotton lint, 108,000; coffee, 34,500; rice, 30,000.
Minerals (metric tons, 1964): Gold, 211,900 troy ounces (ranks 11th among world producers); lime, 26,000; salt, 17,000; copper, 9,240; gypsum (1963), 2,500.
Foreign Trade (1964): *Exports*, $118,240,000 (chief exports: cotton, $51,490,000; coffee, $21,030,000; gold, $6,940,000); *imports*, $137,030,000 (chief imports, 1962: nonelectrical machinery, $13,350,000; petroleum products, $7,014,000). *Chief trading partners* (1963): U.S. (took 39% of exports, supplied 49% of imports); Japan (took 23% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 3,813 miles (504 paved); *motor vehicles* (1964), 16,419 (automobiles, 8,558); *railways* (1963), 216 miles; *merchant vessels* (1964), 5 (14,000 gross registered tons); *national airline*, Lanica; *principal airport*, Managua.
Communications: *Telephones* (1964): 13,900; *television stations* (1964), 2; *television sets* (1964), 10,000; *radios* (1962), 100,000; *newspapers* (1959), 8 (daily circulation, 94,000).

minus on the Bay of Fonseca, and Costa Rica might have to be consulted regarding channeling of the eastern route on the San Juan River.

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NICKEL. See MINING—*Mineral Production.*

NIGER

ASIA
S. AMERICA
AFRICA

President Hamani Diori and leading members of the Niger government escaped an assassination attempt on April 13, 1965, while they were participating in an outdoor prayer ceremony. The attempt was made by Amadou Diop, a former announcer for Radio Peiping and a member of the outlawed Sawaba party. About 50 persons were arrested in conjunction with the plot. Investigations by Niger's security forces pointed to the existence of a more extensive underground Sawaba network than had been previously suspected.

The Sawaba party, a revolutionary group led by Djibo Bakari, is reputedly based in Ghana and receives support from the Communist bloc, particularly Communist China. Since October 1964 the party has carried out subversive activities in Niger, including armed attacks.

Elections. On September 7 the Legislative Assembly approved a new electoral law. On September 23, President Diori was reelected for a second five-year term. A new National Assembly was elected on October 21.

Conspiracy Trial. From May 18 to 28, 65 conspirators who had participated in Captain Diallo's mutiny to overthrow the government in December 1963 were tried at Tillaberry. Diallo and four others were condemned to death, 42 defendants received prison terms, and 18 were acquitted.

NIGER · Information Highlights

Area: 489,189 square miles.
Population: 3,250,000 (July 1, 1964, est.).
Chief City (1964 est.): Niamey, the capital, 42,000.
Government: *President*—Hamani Diori (took office Feb. 25, 1959); *Parliament*—Legislative Assembly, 60 members (all belonging to the Niger Progressive party).
Religious Faiths: Muslims, 99% of population; others, 1%.
Education: Total school enrollment (1962)—46,068 (primary, 43,556; secondary, 1,646; teacher-training, 559; technical, 307).
Finance (1964): *Revenues,* $26,400,000; *expenditures,* $26,400,000; *monetary unit,* CFA franc (246.85 francs equal U.S.$1).
Economic Index: *Cost of living,* 100 (1964=100).
Manufacturing: Meat (1962), 28,000 metric tons.
Crops (metric tons, 1963–64 crop year): Peanuts, 220,000 (ranks 11th among world producers); millet and sorghum, 1,323,000; cassava, 136,000.
Mineral: Tin (1964), 49 metric tons.
Foreign Trade (1964): *Exports,* $21,300,000 (chief export: peanuts, $13,300,000); *imports,* $32,900,000 (chief imports, 1963: woven cotton fabrics, $3,600,000; sugar and honey, $1,300,000; gasoline, $900,000). *Chief trading partners* (1963): France (took 71% of exports, supplied 51% of imports); Nigeria (took 18% of exports, supplied 7% of imports); Netherlands Antilles (supplied 10% of imports).
Transportation: *Roads* (1964), 4,621 miles (86 paved); *motor vehicles* (1964), 5,974 (automobiles, 4,322); *principal airport,* Niamey.
Communications: *Telephones* (1964): 1,700; *radios* (1963), 20,000; *newspapers* (1963), 1 (daily circulation, 1,000).

Construction. In April, President Diori laid the cornerstones of a new hotel, a brick factory, and a metal furniture factory in Niamey.

Foreign Affairs. Niger's foreign policy continued to be predominantly Western-oriented, but Communist countries expanded their activities in the country. From January to April, three Soviet geologists reviewed geological studies in Niger to determine where Soviet technical assistance in this field could best be applied.

On June 10, at Tamanrasset, Algeria, President Diori met with Algerian President Ben Bella (who was ousted from office in July) to discuss the Sawaba problem. The U.S. assistant secretary of state for Africa, G. Mennen Williams, visited Niger from October 2 to 4.

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Office of Central African Affairs
U.S. Agency for International Development

NIGERIA

The Republic of Nigeria appeared to be on the verge of disintegration early in 1965, in the aftermath of a controversial federal parliamentary election held at the end of 1964. Tension abated after the government announced that new elections would be held in districts which had been heavily boycotted by the opposition. Late in 1965 an election was again a source of friction. Looting and killing continued long after the October voting for the regional parliament of Nigeria's Western Region.

The latter crisis precipitated a bloody military coup in January 1966, which brought down the federal government and left the nation under the provisional regime of army commander Maj. Gen. Johnson T.U. Aguiyi-Ironsi. Despite the stormy beginning, most Nigerians were optimistic for progress in 1966. They spoke idealistically about a "new Nigeria" without corruption and tribalism.

Federal Elections. On Dec. 30, 1964, Nigeria held its first nationwide parliamentary election since independence. Even more important than the selection of deputies was the issue of whether the large Northern Region or the smaller combination of Western, Mid-West, and Eastern regions in the south would control the federation. Two large blocs faced each other in the contest. The interests of the north were represented by the Nigerian National Alliance (NNA), a coalition of the Northern Peoples Congress, the Nigerian National Democratic party, and splinter groups. The common concern over Northern domination had brought together rival political leaders in the southern regions. They formed the United Progressive Grand Alliance (UPGA), a coalition of the National Council of Nigerian Citizens (NCNC) of the Eastern Region, the Action Group of the Western Region, and smaller parties.

When irregularities appeared in the nomination of candidates in the north, the UPGA, in an atmosphere of growing tension and violence, demanded that the elections be postponed. The request was refused, and the UPGA called upon its supporters to boycott the polls. The UPGA boycott was partly successful, and 54 of the 312 seats in the House of Representatives were left vacant. Of the remaining 258 seats, the NNA won 198 (of which 162 came from the Northern Region); the UPGA, 57; and the Independents, 3.

The results did not settle the political crisis, however. At first President Nnamdi Azikiwe, who had

NIGERIA : Information Highlights

ASIA
S. AMERICA
AFRICA

Area: 356,668 square miles.
Population: 56,400,000 (July 1, 1964 est.).
Chief Cities (1963 census): Lagos, the capital, 665,246; Ibadan, 627,379; Ogbomosho, 319,881; Kano, 295,432.
Government: Provisional military government under *Chief of State* Maj. Gen. Johnson T.U. Aguiyi-Ironsi (assumed power Jan. 16, 1966).
Religious Faiths: Muslims, 42% of population; tribal religions, 27%; Christians, 25%.
Education: *Total school enrollment* (1962)—3,071,526 (primary, 2,834,010; secondary, 195,499; teacher-training, 30,756; technical, 7,241; higher, 4,020).
Finance (1963–64 est.): *Revenues,* $339,700,000; *expenditures,* $337,200,000; *public debt,* $273,300,000; *monetary unit,* pound (0.3571 pound equals U.S.$1).
Gross Domestic Product (1962): $3,002,000,000.
Cost of Living (1964): 124 (1958=100).
Manufacturing (metric tons): Cement (1964), 660,000; margarine (1961), 600; beer (1963), 446,000 hectoliters.
Crops (metric tons, 1964–65 crop year): Peanuts, 1,633,000 (ranks 3rd among world producers); palm kernels (1963–64), 419,700 (world rank, 1st); cocoa beans, 270,000 (world rank, 2nd); cottonseed (1963–64), 88,000; rubber, 73,200.
Minerals (metric tons, 1964): Tin, 8,861 (ranks 7th among producers); coal (1963), 577,000; columbium, 2,377; zirconium (U.S. imports), 564; tantalum (U.S. imports), 38; gold, 244 troy ounces; crude petroleum, 43,997,000 barrels.
Foreign Trade (1964): *Exports,* $600,800,000 (chief exports: peanuts and peanut oil, $118,720,000; cacao, $112,280,000; crude petroleum, $89,880,000; palm kernels and palm oil, $88,760,000); *imports,* $712,880,000 (chief imports, 1963: cotton fabrics, $60,035,000; nonelectrical machinery, $58,565,000; iron and steel, $30,979,000). *Chief trading partners* (1963): Britain (took 40% of exports, supplied 34% of imports); U.S. (took 9% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 45,498 miles (7,706 paved); *motor vehicles* (1964), 77,000 (automobiles, 50,000); *railways* (1963), 1,989 miles; *merchant vessels* (1964), 9 (53,000 gross registered tons); *national airline,* Nigerian Airways; *principal airports,* Kano and Lagos.
Communications: *Telephones* (1964): 58,658; *television stations* (1964), 8; *television sets* (1964), 15,000; *radios* (1963), 400,000; *newspapers* (1963), 20.

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sided with the opposition, refused to call on the NNA leader and outgoing prime minister, Abubakar Tafawa Balewa, to form a government. Finally, on Jan. 4, 1965, Azikiwe and Balewa settled their differences, and on January 7 the prime minister announced his temporary 17-member cabinet. All of the cabinet were members of the NNA except for the ministers of finance and aviation, who belonged to the NCNC. Both the Action Group and the NCNC accepted the new government with misgivings on the condition that supplementary elections would be held in the Eastern Region and in Lagos to fill vacancies created by the boycott.

The new federal parliament, which convened on February 17, passed a special electoral bill, and in the subsequent election, held on March 18, the UPGA captured 51 of the 54 recontested seats. The House of Representatives was later redistributed so that the NNA held 199 seats; the UPGA, 108; and the Independents, 5.

Regional Election. Balloting for the assembly of the Western Region took place on October 11. The Action Group, which governed the region until 1962, had been given a good chance of making a comeback, but the ruling Nigerian National Democratic party won by a 3-to-1 majority. Angered supporters of the Action Group charged the government with widespread vote-rigging. After the results became known, rioting broke out and continued through the end of the year. At least 160 persons were killed during the disorders.

Government Upheaval. Dissident young military officers, aroused against the politicians whom they considered corrupt and incompetent, staged a coup d'état on Jan. 15, 1966. They kidnapped and killed Prime Minister Sir Abubakar Tafawa Balewa, his finance minister, and the prime ministers of the Northern and Western Regions. However, most of the army remained loyal to the federal government, and on January 16, General Aguiyi-Ironsi gained control. Accepting the invitation of the civilian Council of Ministers to head a provisional military government, he suspended Parliament and abolished all federal and regional civilian offices. On January 18 he appointed military governors for the four regions, and on January 21 he founded a Supreme Military Council and a federal Executive Council, both under his personal leadership. The new regime pledged its determination to end corruption and solidify the federal government.

Economy. On July 8, Dr. Pius Okegbo, Nigeria's ambassador to the European Economic Community (EEC), announced in Brussels that Nigeria had successfully concluded negotiations for its association with the EEC. There was skepticism among some Nigerians of the benefits of association with EEC, and concern that Nigeria would be relegated to the role of a supplier of raw materials for Europe.

In 1964 the value of Nigeria's external exports reached a record $600,800,000. However, the demands of the National Development Plan resulted in imports totaling $712,880,000, thus creating a deficit of $112,000,000 in 1964, compared with a $50,000,000 deficit in 1963. Moreover, in the National Development Plan Progress Report, the cost of Nigeria's six-year development plan (1962–68) was raised from $1,895,040,000 to $2,240,000,000, indicating that Nigeria will need even greater amounts of external assistance to carry out its projects.

Nevertheless, the Nigerian economy continued to grow in 1965, paced by oil exploration and production for export. Nigerian Gulf Oil discovered a new oilfield in the Eastern Region in January, and another in the Niger Delta in March. In September the Phillips Petroleum Company opened an oil refinery, at Port Harcourt, capable of processing 1,900,000 tons of crude petroleum annually, to become the eighth oil company working in Nigeria. Also in 1965, a new sugar refinery was opened at Bacita, and a textile plant began operation at Kaduna.

In November 1964 the Nigerian External Broadcasting Service (the Voice of Nigeria) was inaugurated, the Bornu Railway extension in northeastern Nigeria, was completed and the multimillion-dollar Wuja bridge over the Niger near Bida was opened. The expansion of communications continued in 1965, and both Britain and the United States pledged assistance to expand and modernize Nigeria's long-distance telecommunications. In March the International Development Association of the World Bank extended $35,000,000 in credits to Nigeria.

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PICTORIAL PARADE

1965 NOBEL PRIZE WINNERS are *(left to right)* Robert Burns Woodward (chemistry); Julian Schwinger and Richard Feynman (physics); François Jacob, André Lwoff, and Jacques Monod (medicine); Mikhail Sholokhov (literature).

NOBEL PRIZES

The Nobel Prizes for 1965, each award worth the equivalent of about $56,000, were presented on Dec. 10, 1965, to individuals for their work in literature and the sciences, and to an agency of the United Nations for its contributions to world peace. All of the prizes except the peace prize were awarded in Stockholm, Sweden.

Peace. The 1965 Nobel Prize for peace was given to UNICEF (United Nations International Children's Fund), which became the ninth organization in the 64-year history of the Nobel awards to receive the peace prize. UNICEF's accomplishment was described as "spread[ing] a table, decked with all the good things that nature provides, for all the children of the world."

The peace prize, which was awarded in Oslo, Norway, by King Olav V, was accepted by Henry R. Labouisse, executive director of UNICEF.

Physics. A Japanese and two American scientists shared the 1965 Nobel Prize in physics and the $56,000 in prize money "for their fundamental work in quantum electrodynamics, with deep-plowing consequences for the physics of elementary particles." The winners were Richard P. Feynman of the California Institute of Technology, Julian S. Schwinger of Harvard, and Shinichiro Tomonaga of Tokyo Kyoiku University.

Richard Phillips Feynman was born in New York, N.Y., on May 11, 1918. He received his B.S. at the Massachusetts Institute of Technology in 1939 and his Ph.D. in theoretical physics at Princeton in 1942. He was involved in the Manhattan (atomic bomb) Project during its early stages. As a group leader in theoretical physics at Los Alamos, N. Mex., Feynman saw the first test explosion of the atomic bomb. He has been Tolman professor of physics at the California Institute of Technology since 1951. In 1954 he won the $15,000 Albert Einstein award for scientific achievement.

Julian Seymour Schwinger was born in New York, N.Y., on Feb. 12, 1918. He received his B.A. in 1936 at the age of 17 and his Ph.D. in physics a year later, both from Columbia University. After working in California with nuclear physicist J. Robert Oppenheimer, he joined the faculty of Harvard University in 1945 and became a full professor in 1946—one of the youngest in Harvard's 300-year history. He was a cowinner in 1951 of the Albert Einstein award.

Shinichiro Tomonaga was born in Kyoto, Japan, on March 31, 1906. He is a son of the noted philosopher and teacher Sanjuro Tomonaga. He graduated from Kyoto University in 1929, studied for a time at the University of Leipzig with the great German physicist Werner Heisenberg (the 1932 Nobel laureate in physics), then took his Ph.D. at Kyoto University in 1939. In 1941 he began teaching at the Tokyo Bunrika University (now Tokyo Kyoiku University), where he is now director of the Institute for Optical Research. He won the Japanese Academy Prize in 1948 for his work with Masao Kotani on electromagnetism.

Chemistry. The 1965 Nobel Prize in chemistry was won by Robert Burns Woodward, Morris Loeb professor of chemistry at Harvard, for his development of fundamental techniques for the synthesis of organic substances. The Swedish Royal Academy of Science cited Woodward for illustrating "the difference in structure between chlorophyll and its counterpart in . . . human blood, hemoglobin."

Robert Burns Woodward was born in Boston, Mass., on April 10, 1917. He acquired both a B.S. (1936) and a Ph.D. (1937) in just four years at the Massachusetts Institute of Technology. He began teaching at Harvard in 1938 and became Morris Loeb professor of chemistry there in 1953. His other awards include the Synthetic Organic Chemistry Award of the American Chemical Society (1957) and the Davy Medal (1959).

Physiology or Medicine. Three French biologists shared the 1965 Nobel Prize in physiology or medicine. They were honored for their discovery of regulatory activities inside body cells that contribute to the "genetic control of enzymes and virus synthesis." The three men are André Lwoff, Jacques Monod, and François Jacob, of the Pasteur Institute, Paris, where they work as a team. (See BIOCHEMISTRY.)

André Lwoff was born in Allier Department, France, in 1902. He received doctorates in both medicine and natural science in 1927, then joined the staff of the department of microbic physiology of the Pasteur Institute in Paris, where he later headed the department. In addition to his work at the Pasteur Institute, he has taught microbiology at the Sorbonne since 1959. Both the U.S. National Academy of Sciences and the Royal Society of London elected him to foreign membership some years ago, but, ironically, the French Academy of Sciences has not yet offered him membership. He holds the Medal of the Resistance for his work with the French underground in World War II, and is an officer of the Legion of Honor.

Jacques Monod was born in Paris in 1910. He took his doctorate in biology in 1941, became laboratory chief of the Pasteur Institute (1945–53), and head of the cellular biochemistry department there in 1953. Since 1960 he has been professor of metabolic chemistry at the Sorbonne. An officer of the Legion of Honor, he holds the Croix de Guerre and the American Bronze Star (1945).

François Jacob was born in Nancy in 1920. He took an M.D. in 1947 and a Sc.D. in 1954 from the University of Paris, joining the Pasteur Institute in 1950. In 1964 he became professor of cellular genetics at the Collège de France—a chair created especially for him. He was instrumental in establishing in 1964 the Council of the European

WIDE WORLD

1965 NOBEL PEACE PRIZE is accepted on behalf of UNICEF by its executive director, Henry R. Labouisse (right).

Organization for Molecular Biology, which he heads. He is a commander of the Legion of Honor and a holder of the Croix de Guerre.

Literature. For only the third time in the history of the Nobel Prizes, the award for literature went to a Russian—Mikhail Sholokhov. It was the first time the prize was given to a Kremlin-approved Russian writer. In awarding Sholokhov the 1965 Nobel Prize in literature, the Swedish Academy cited his "artistic power and integrity," and described him as "one of the most outstanding writers of our time." (See SOVIET LITERATURE.)

Mikhail Aleksandrovich Sholokhov was born in Kruzhilin, a village in Russia's Don River basin, on May 24, 1905. He joined the Red Army as a machine gunner in 1920 and saw action against roving terrorist bands. *And Quiet Flows the Don*, the first two volumes of *The Silent Don*, appeared in English in 1934; the third and fourth volumes were published in English as *The Don Flows Home to the Sea* (1940).

NORTH AMERICA. See CANADA; MEXICO; UNITED STATES.

NORTH ATLANTIC TREATY ORGANIZATION

The North Atlantic Treaty Organization (NATO), like the Common Market and other agencies for European international cooperation, was in serious difficulty in 1965. The main cause of the crisis was the intransigence of French policy as directed by President Charles de Gaulle. The view of most NATO members was that the French president was oversensitive about French independence in an age when economic and military considerations made absolute independence obsolete.

De Gaulle was more hostile toward NATO than he was toward the Common Market. He was especially sensitive to problems of national defense, and he increasingly opposed the NATO system of an integrated defense force. Because NATO includes Britain, Canada, and, above all, the United States, he distrusts the alliance, claiming to fear the domination of Europe by the United States.

De Gaulle's Threat of Withdrawal. In a press conference on Sept. 9, 1965, de Gaulle spoke of the possibility of French secession from NATO. He scoffed at those who "profess that our country should efface its personality in international organizations" and warned that "upon the expiration of the commitments formerly made—that is, in 1969 by the latest—the subordination known as integration, which is provided for by NATO and which hands our fate over to foreign authority, shall cease, as far as we are concerned."

In mentioning 1969, de Gaulle was alluding to Article 13 of the North Atlantic Treaty, which provides that after the treaty has been in force for 20 years, a member may withdraw from it after giving 12 months' notice. He was perhaps delivering advance notice of complete French withdrawal, or preparing NATO for a French demand in 1969, or earlier, that the integrated command structure be dismantled as the price of France's continuing as a member. This interpretation of de Gaulle's remarks was made by former President Dwight D. Eisenhower, who was the first supreme commander of NATO forces. Eisenhower further commented that without an integrated command structure NATO would be no more than a coalition of separate forces, and "coalitions in the past have always failed."

NATO Problems Without France. In 1965 there was evidence of France's noncooperation with its NATO partners. In the spring, France announced that it would not participate in an exercise planned for 1966 as a test of the alliance's communication systems. More significant still was French disapproval (amounting to a veto) of building a new center of operations for Supreme Headquarters, Allied Powers, Europe (SHAPE). SHAPE, the military directorate of NATO, has operated thus far from makeshift headquarters outside Paris.

French noncooperation poses a geopolitical difficulty, for, in a physical sense, France is the core of the alliance. Not only are NATO headquarters, both civil and military, situated in France, but the enormously expensive NATO military installations and communication systems built in the past decade center on France. Consequently the United States and the other NATO members, if they are to be realistic, must face the question of how NATO could continue to exist and function in the event of France's withdrawal. There would be great cost, and considerable technical disadvantages, in moving establishments to the alternative sites (West Germany or Britain). However, there would also be corresponding advantages in gaining freedom to operate without French opposition.

The Price of NATO's Success. To speak as if NATO's present troubles are all the fault of France is, of course, to oversimplify. NATO's success in blocking Soviet advances in Europe since 1949 has led European members to regard NATO as being no longer necessary. The French are just more outspoken in expressing the nationalistic attitudes that may be found in other NATO countries. For example, the British have made it clear that they would like to withdraw one fifth of their 51,000-man British Army of the Rhine.

Council Meetings. The routine functioning of NATO continued in 1965. The North Atlantic Council held its spring ministerial meeting in London, May 11–12. In an opening address, British Prime Minister Harold Wilson stressed the need for interdependence. He declared: "There is no greater delusion than the feeling we can solve our common problem on the basis of adventures in military nationalism."

The meeting's final communiqué, as has been customary in recent years, skirted rather than dealt with the great problems faced by the alliance. It contained a "Three-Power Declaration on Germany" by the United States, France, and Britain, which stated: "The three governments consider that in the absence of a real solution of the German problem, based on the exercise in the two parts of Germany of the right of self-determination, the situation in Europe as a whole will remain unsettled and . . .

NATO COUNCIL MEETS at ministerial level in London in 1965. British Prime Minister Harold Wilson (standing) speaks at the opening of the spring session on May 11. Seated (left to right) are Stavros Costopoulos (Greece), G.I. Gudmundsson (Iceland), Amintore Fanfani (Italy), and Paul-Henri Spaak (Belgium).

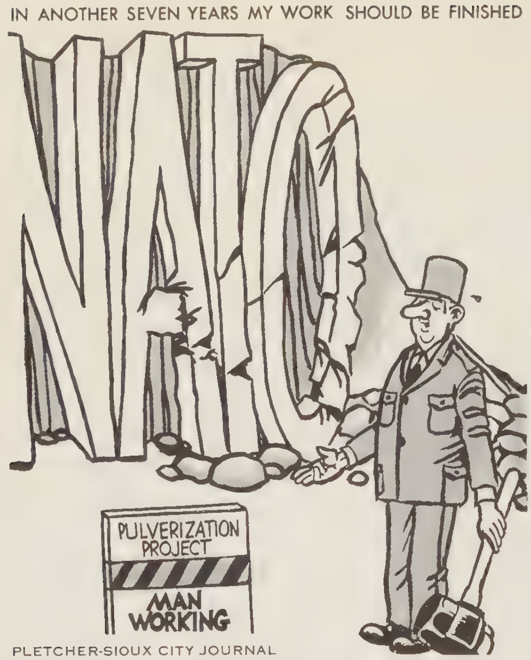
KEYSTONE

in consequence peace will not be assured on that continent." This declaration constituted a conciliatory gesture on de Gaulle's part, for in February he had come out in favor of a European approach to the German problem—one excluding the United States and, perhaps, Britain as well.

The semiannual meeting of the NATO Ministerial Council, held December 14–16 in Paris, heard U.S. Secretary of State Dean Rusk and Secretary of Defense Robert McNamara ask for NATO support of the U.S. policy in Vietnam. The communiqué issued at the end of the conference expressed the council's disappointment over the continued division of Germany and their hope for an amicable settlement of the situation in Cyprus.

Problem of Nuclear Control. Apart from French attitudes there remains the related and unsolved problem of controlling atomic weapons within the alliance. The problem is to modify the American quasi-monopoly of nuclear weapons so that the European NATO members can participate meaningfully in the control and ownership of these weapons systems and take part in making and executing strategic policies.

The U.S. Department of Defense officially admitted on October 16 that the original proposal for a mixed-manned nuclear missile fleet was dead. However, there seemed to be official backtracking a few days later, for the U.S. State Department announced that it still favored participation by West Germany in some kind of nuclear arrangement. It was not clear, however, how that objective could best be obtained. At the same time, Harlan Cleveland, the new U.S. ambassador to NATO, said in


IN ANOTHER SEVEN YEARS MY WORK SHOULD BE FINISHED
NATO
PULVERIZATION PROJECT
MAN WORKING

PLETCHER-SIOUX CITY JOURNAL

DESTRUCTION OF THE NATO ALLIANCE by French President de Gaulle is satirized in American newspaper cartoon.

Paris that the United States would continue to press for increased integration among nations that were ready, willing, and able to cooperate. It was surprisingly announced on November 20 that for six years, planes and missiles of NATO allies (including West Germany) have been nuclear armed though still allegedly under U.S. controls.

French Plan for Reorganization. Cleveland's speech was in part a reply to a French proposal for reforming NATO, published, with de Gaulle's approval, in the October issue of *Politique étrangère,* the organ of the Centre d'Études de Politique Étrangère. The proposal envisaged a new NATO consisting of inner-circle and outer-circle groups. The latter would cover the geographical area of the present NATO, but under a traditional treaty of alliance. The inner group, with the United States excluded, would embody some degree of integration. The other NATO members are unlikely to accept the proposal.

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NORTH CAROLINA

Faced with a threat that its state-supported universities and colleges might be disaccredited by the Southern Association of Colleges and Schools, the North Carolina General Assembly met in a special session on November 15 to amend a controversial 1963 statute controlling Communist speakers at state-supported institutions. The legislature, following the recommendation of a nine-member commission, modified the law by returning to the institutions' boards of trustees control over visiting speakers. The commission had held two days of televised hearings in August, and two more in September, before reporting on November 5 to Gov. Dan K. Moore, who promptly called the special session of the legislature.

Legislation. In its biennial session, held from February 3 to June 17, the General Assembly adopted the largest budget in the history of the state. The salary of state employees was increased by 10%. Seven new state agencies were created in the executive branch, one was abolished, and at least a dozen underwent organizational changes. The legislature authorized a record number of 11 temporary study commissions.

The General Assembly sent two issues to the voters for approval on November 2: (1) a proposed constitutional amendment to create an intermediate Court of Appeals between the State Supreme Court and the Superior Courts; and (2) a $300 million highway bond issue. The voters approved both of these proposals by a 3 to 1 majority.

During the regular session, many laws relating to motor vehicles and highway safety were passed, including one requiring periodic inspection of all motor vehicles registered in the state. The legislature also created a Traffic Safety Authority and a Highway Safety Research Center.

No action was taken on the reapportionment of seats in the General Assembly or of the state's congressional districts.

Economic Developments. In general, North Carolinans enjoyed prosperity in 1965. Cash income from farm crops and livestock was one of the highest on record—some $1,167,000,000. Industrial

NORTH CAROLINA · Information Highlights

Area: 52,712 square miles.
Population: 4,877,000 (1965 est.).
Chief Cities (1965 est.): Raleigh, the capital (104,000); Charlotte (230,000); Winston-Salem (139,000); Greensboro (136,000).
Government: *Chief Officers*—governor, Dan K. Moore (Democrat); lt. gov., Robert W. Scott (D); secy. of state, Thad Eure (D); atty. gen., Wade Bruton (D); treas., Edwin Gill; supt. of pub. instr., Charles F. Carroll; chief justice, E.B. Denny. *Legislature*—General Assembly (convened Feb. 3, 1965); Senate, 50 members (49 Democrats, 1 Republican); House of Representatives, 120 members (106 D, 14 R).
Education: *School enrollment* (1964–65)—public elementary, 867,103 pupils (29,450 teachers); public secondary, 335,049 pupils (13,150 teachers); nonpublic schools, 22,200 pupils (1,060 teachers); college and university (fall 1964), 99,075 students. *Public school expenditures* (1964–65)—$353,377,000 ($322 per pupil); teacher's average salary, $5,052.
Public Finance (fiscal year 1964): *Revenues,* $1,138,269,452 (3% sales tax, $156,730,512; motor fuel tax, $141,959,630; federal funds, $239,120,636). *Expenditures,* $970,971,559 (education, $368,987,361; health, welfare, and safety, $171,661,132; highways, $200,206,092). *State debt,* $212,368,000 (June 30, 1964).
Personal Income (1964): $9,282,000,000; average annual income per person, $1,913.
Public Assistance (fiscal year 1964): $79,235,000 (aged, $24,536,000; dependent children, $28,689,000).
Labor Force (employed persons, July 1965): *Agricultural,* 533,000; *nonagricultural* (wage and salary earners), 1,379,900 (41.5% manufacturing, 18.1% trade, 13.5% government). *Unemployed persons* (July 1965)—88,000.
Manufacturing (1963): Value added by manufacture, $4,617,912,000 (transportation equipment, $37,713,000; primary metals, $42,875,000; nonelectrical machinery, $114,895,000; electrical machinery, $278,895,000; fabricated metals, $80,946,000; food and products, $328,381,000).
Agriculture (1964): *Cash farm income,* $1,271,913,000 (livestock, $369,911,000; crops, $866,846,000; govt. payments, $35,156,000). *Chief crops* (tons)—corn for grain, 2,323,000 (ranks 10th among the states); tobacco, 486,000 (rank, 1st); peanuts, 182,000 (rank, 2nd); sweet potatoes, 128,000 (rank, 2nd); potatoes, 114,200 (rank, 18th); barley, 69,000 (rank, 19th); grapes, 1,400 (rank, 11th).
Mining (1964): *Production value,* $56,470,000 (ranks 40th among the states). *Chief minerals* (tons)—feldspar, 363,047 (rank, 1st); talc, 106,035 (rank, 3rd); mica, 64,131 (rank, 1st); stone, 17,943,000; sand and gravel, 11,150,000; clays, 3,199,000.
Fisheries (1964): *Commercial catch,* 227,375,644 pounds ($7,770,621). *Leading species*—menhaden, 172,991,671 pounds ($2,108,529); hard blue crabs, 24,091,505 pounds ($1,275,189); alewives, 7,560,904 pounds ($76,880); shrimp, 4,279,141 pounds ($1,503,288).
Transportation: *Roads* (1965), 83,247 miles (49,821 paved); *motor vehicles* (1964), 2,258,006; *railroads* (1964), 6,483 miles; *aircraft* (1964), 2,257 (167 airports).
Communications (1965): *Telephones,* 1,513,700; *television stations,* 16; *radio stations,* 241; *newspapers,* 47 (daily circulation, 1,138,024).

growth continued at about the same pace as in previous years, with investments in new and expanded industrial plants totaling $285 million. The revenues of the state's two ports increased 18.6% over 1964, and transportation industry receipts reached a record $1,100 million.

Education. Expenditures for state, local, and federal education reached an all-time high. Salaries of teachers were increased 5% for each year of the 1964–65 biennium. By the end of 1965, most, if not all, of the state's school districts were integrated. However, there was considerable confusion in the matter of compliance with the provisions of the Civil Rights Act of 1965.

Charlotte College became the University of North Carolina at Charlotte, and the state university campus at Raleigh was renamed the North Carolina State University at Raleigh. The General Assembly also gave qualified authorization for a two-year medical school at East Carolina College in Greenville. Several new community colleges began operation during the year, and others were preparing to open in 1966.

Civil Rights Demonstrations. Violence flared during August at Negro voting rights demonstrations in Plymouth, and in November the homes of four Negroes were bombed in Charlotte.

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NORTH DAKOTA

In 1965, for the first time in many years, a coalition between the Democratic party and the Nonpartisan League (NPL) held a majority of seats in the North Dakota House of Representatives. The Senate, however, was controlled by the Republicans. Although much essential legislation was passed, dissension in the Senate between Democrats and Republicans over taxation resulted in the suspension of the current state tax program.

The Tax Problem. The Republicans proposed a tax plan, presented by the Interim Legislative Research Committee, which provided for an increase in the sales tax and a gradual elimination of the personal property tax. The Democratic-NPL faction introduced their own plan, which involved the immediate elimination of all personal property taxes and an increase in the state income tax. The Democrats refused to accept the Republican proposal, and the legislative session ran six days beyond the scheduled adjournment before the Democratic proposal was adopted. However, the measure was quickly referred to the voters, who defeated the proposed tax package by a 3 to 1 margin. Because the former sales tax was suspended as of July 1, 1965, the referendum defeat left the state without any tax program.

On June 14, Gov. William L. Guy called a special session of the legislature to reenact the sales tax. No agreement was reached, and Attorney General Helgi Johanneson ruled that it was legal to substitute a state use tax originally designed to tax goods purchased outside the state. The question of the legality of applying this tax to goods purchased within the state was referred to the courts.

Agriculture. North Dakota farmers harvested a record crop in the fall of 1965, despite damaging rains throughout September. Production of the state's principal crops totaled 12.3 million tons, as compared with the previous all-time record of 11.2 million tons harvested in 1962. Wheat was the

NORTH DAKOTA · Information Highlights

Area: 70,655 square miles.
Population: 642,000 (1965 est.).
Chief Cities (1965 est.): Bismarck, the capital (31,800); Fargo (50,500); Grand Forks (37,000); Minot (35,800); Jamestown (16,800); Williston (12,300); Dickinson (11,400); Mandan (11,200).
Government: *Chief Officers*—governor, William L. Guy (Democrat); lt. gov., Charles Tighe (D); secy. of state, Ben Meier (Republican); atty. gen., Helgi Johanneson (R); treas., Walter Christensen (D); supt. of pub. instr., M.F. Peterson; chief justice, Thomas J. Burke. *Legislature*—Legislative Assembly (convened Jan. 5, 1965); Senate, 49 members (29 Republicans, 20 Democrats); House of Representatives, 109 members (65 D, 44 R).
Education: *School enrollment* (1964–65)—public elementary, 106,390 pupils (3,930 teachers); public secondary, 43,650 pupils (2,634 teachers); nonpublic schools, 23,600 pupils (950 teachers); college and university (fall 1964), 19,705 students. *Public school expenditures* (1964–65)—$56,475,000 ($422 per pupil); average teacher's salary, $4,800.
Public Finance (fiscal year 1965): *Revenues,* $193,308,075 (2.25% sales tax, $23,493,530; motor fuel tax, $15,301,965; federal funds, $2,579,690). *Expenditures,* $184,191,917 (education, $58,450,351; health, welfare, and safety, $43,382,506; highways, $62,323,575). *State debt,* $3,397,250 (June 30, 1965).
Personal Income (1964): $1,376,000,000; average annual income per person, $2,133.
Public Assistance (fiscal year 1965): $16,385,155 to 18,244 recipients (aged, $5,862,556; dependent children, $4,117,716).
Labor Force (employed persons, July 1, 1965): *Agricultural,* 113,000; *nonagricultural* (wage and salary earners), 176,650 (4.7% manufacturing, 23.0% trade, 22.3% government). *Unemployed persons* (July 1965)—6,470.
Manufacturing (1963): Value added by manufacture, $72,484,000 (fabricated metals, $2,016,000; food and products, $34,285,000; printing and publishing, $11,089,000; stone, clay, and glass products, $5,221,000).
Agriculture (1964): *Cash farm income,* $740,772,000 (livestock, $212,327,000; crops, $420,768,000; govt. payments, $107,677,000). *Chief crops* (tons)—wheat, 4,525,000 (ranks 2nd among the states); hay, 4,227,000 (rank, 10th); barley, 2,183,000 (rank, 1st); oats, 1,389,000 (rank, 4th); sugar beets, 567,000 (rank, 10th); potatoes, 510,000 (rank, 7th); rye, 293,000 (rank, 1st); sorghum grain, 195,000 (rank, 9th); flaxseed, 376,000 (rank, 1st); corn for grain, 160,000; soybeans, 81,000.
Mining (1964): *Production value,* $92,866,000 (ranks 30th among the states). *Chief minerals* (tons)—coal (lignite), 2,637,000 (ranks 15th among the states); petroleum, 25,731,000 barrels (rank, 14th); natural gas, 34,700,000,000 cubic feet (rank, 16th); sand and gravel, 10,520,000; stone, 31,000.
Transportation: *Roads* (1964), 107,544 miles (7,925 paved, 55,626 gravel surfaced); *motor vehicles* (1965), 382,789; *railroads* (1965), 5,264 miles; *airlines* (1965), 3 (271 airports).
Communications (1965): *Telephones,* 250,600; *television stations,* 10; *radio stations,* 28; *newspapers,* 10 (daily circulation, 176,292).

NORTH DAKOTA and other upper Midwestern states were inundated by floods in April. Farm near Drayton, N. Dak., lies buried under rising waters of the Red River.

WIDE WORLD

leading crop with a total yield of 176,250,000 bushels.

Electric Power. With an almost inexhaustible supply of lignite resources (more than 400 billion tons), North Dakota is now annually "exporting" 1.2 million tons of lignite coal in the form of electric power. It is estimated that the area being supplied, comprising several states, will need 2 million kilowatts by 1970 and 3.5 million by 1980. To help meet this demand, North Dakota's power capacity is being increased from 200,000 to 600,000 kilowatts. The power is sold at a "postage stamp" rate—that is, consumers along the entire line (whether they live in Colorado, Nebraska, Iowa, or other distant points) pay the same amount for their electricity.

Water. In the fall, the state authorized construction to begin on the Garrison Diversion plan under which about 250,000 acres will be irrigated. The plan provides for many alkali lakes, including Devils Lake, to be brought up to higher levels and freshened so that they can sustain fish. As a result, both recreation and agriculture will benefit from the plan.

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NORTHERN IRELAND. See Commonwealth of Nations.

NORTHERN RHODESIA. See Zambia.

NORTHWEST TERRITORIES

Measures were taken during 1965 to bring a greater degree of self-government to the Northwest Territories and extend the franchise to all residents.

Government. At the request of the Territorial Council, an advisory commission was appointed by the Canadian government to investigate the development of self-government in the Northwest Territories. The commission is headed by A.W.R. Carrothers, dean of law at the University of Western Ontario, and includes John W. Parker, mayor of Yellowknife, and Jean Beetz, associate professor of law at the University of Montreal. It will study the problems involved in such a development, seek the views of local residents, and recommend the necessary steps to provide increased self-government.

Legislation. At the June session of the Territorial Council, the franchise was extended to all territorial residents. The council increased the number of electoral districts to seven by creating three new electoral districts: Central Arctic, Keewatin, and Eastern Arctic. Complementary federal legislation is being sought to increase council membership from nine to 12 to accommodate the new districts.

— NORTHWEST TERRITORIES · Information Highlights —

Area: 1,304,903 square miles.
Population: 25,000 (Oct. 1, 1965 est.).
Largest City (1961 census): Yellowknife, 3,245.
Government: *Chief Officer*—Commissioner B.G. Sivertz. *Legislature*—Territorial Council, 9 members (4 elected locally, 5 appointed), meets twice yearly: in winter, at Ottawa; in summer in the territories, at Fort Smith. There are also regional offices at Inuvik, Yellowknife, Churchill, and Frobisher Bay.
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 869 pupils (43 teachers); federal, 5,391 (289). *Public school expenditures* (fiscal year 1961–62)—$1,033,000.
Public Finance (1964–65): *Revenues*, $6,218,965 (liquor profits, $1,170,951; gasoline and fuel oil tax, $709,615; game management, $44,914). *Expenditures*, $6,808,898 (education, $1,686,729; health and welfare, $2,449,296; municipal affairs and development, $401,610).
Public Assistance (fiscal year 1962): $138,000 (aged and blind, $55,000; dependents and unemployed, $83,000).
Mining (1964 est.): *Production value*, $17,234,800. *Chief minerals*—gold, 416,963 troy ounces (ranks 3rd among the provinces and territories); zinc, 3,195 tons (rank, 8th); crude petroleum, 680,239 barrels (rank, 6th); silver, 66,462 troy ounces (rank, 10th).
Fisheries (1963 est.): *Commercial catch*, 6,347,000 pounds, valued at $796,000.
Transportation: *Motor vehicles* (1963), 4,323; *airlines* (1963), 2 (13 airports).
Communications: *Telephones*, 2,912 (1963); *radio stations*, 4.

Deputy Commissioner. Stuart M. Hodgson of Vancouver, B.C., was appointed first full-time deputy commissioner of the territories.

Power Project. The 18,000-kilowatt hydroelectric power project at the Twin Gorges of the Taltson River, 35 miles northeast of Fort Smith, was completed in October. The $9.1 million complex includes a 25,000-horsepower generating station operated from a remote control center at Fort Smith, and a 170-mile transmission line carrying power through Fort Smith to Pine Point Mines' new lead-zinc concentrates plant near Great Slave Lake. Substations have already been built at Fort Smith and Pine Point to distribute the power locally.

Highways. Tenders will be called in 1966 for the building of a 60-mile stretch of highway, starting 67 miles west of Fort Smith and joining an existing road from Pine Point to the Hay River Highway. The new road will form the midsection of a 165-mile, east-west communicating road between Fort Smith and the highway junction directly south of Hay River.

B.G. Sivertz
Commissioner, Northwest Territories

NORWAY

A coalition government, excluding the Labor and Socialist parties, took over control of the Storting (the Norwegian parliament), as a result of the elections on Sept. 12–13, 1965.

Elections. The Conservative, Liberal, Center (farmers'), and Christian People's parties were returned to power for the first time in 30 years. Agreeing in advance to form a coalition government, they won a sweeping victory in the general elections, capturing 80 seats in the 150-member Storting. The parties previously had held a total of 74 seats. The Conservatives increased their membership from 29 to 31, the Liberals from 14 to 18, and the Center party from 16 to 18. The Christian People's party, however, dropped from 15 to 13. Of the noncoalition parties, the Labor party, by far the largest single party, won over 43% of all the votes cast, yet lost 6 seats, for a total of 68. The left-wing Socialist party kept its 2 seats.

New Government. The coalition government, with Center party leader Per Borten as prime minister, took office on October 12. Of the 14 other seats in the cabinet, six were allocated to the Conservatives, three to the Liberals, three to the Christian People's party, and two to the Center party.

Outlining his government's policy to the Storting on October 22, Prime Minister Borten said that Norway's foreign and defense policy would continue to be based on support for the United Nations, the North Atlantic Treaty Organization, and certain international economic organizations. He said that adjustments would be made in the progressive state income tax, and that the whole fiscal system would be thoroughly reconsidered, with a shift in emphasis from taxation on earned income to more indirect forms of taxation. Measures would be taken to reduce inflationary pressure and Norway's international payments deficit.

Economy. Norway's economic boom continued

KEYSTONE

NORWAY'S ELECTION in September brought in a coalition government. Per Borten (right), the Center party leader and the new prime minister, confers with John Lyng (left), the Conservative party leader, and Kjell Bondevik (center), the Christian National party leader.

throughout 1965, but the increase in production and exports was somewhat smaller than in 1964. The balance of payments deficit, sharply reduced in 1964, rose again, mainly because more ships and other capital investment goods were imported during the year 1965. The budget was extremely expansionary, with expenditures up by about 13% from the previous year, but its effect was partly offset by strict credit restrictions. Although inflationary pressures continued, consumer prices showed a more moderate increase than in previous years.

In June the Storting, then Labor controlled, passed a law on monetary and credit policy over the protest of the opposition parties and the business community. The law gives the government extensive power to regulate money and the capital market, as well as the activities of private credit institutions. As a consequence, the private credit institutions withdrew from the Joint Consultation Council, which for 10 years had been a major instrument in formulating Norwegian credit policy. The new government is not likely to make use of the law's more controversial provisions.

Social Legislation. The Storting agreed on the main principles of a "people's pension scheme" to take effect Jan. 1, 1967. It seeks to secure a reasonable standard of living for the retired, the disabled, and those who have lost their family breadwinner, and will incorporate the present system covering these groups.

Oil and Natural Gas. The Ministry of Industry granted concessions for oil and gas exploration and exploitation off the Norwegian coast south of the 62nd parallel. The concessions, given to nine groups representing American, Canadian, British, French, Italian, Dutch, Belgian, and Norwegian interests, include a total area of over 40,000 square kilometers. Drilling operations are scheduled to start in 1966. Meanwhile, a U.S. petroleum company, Caltex, started exploratory drilling in the concession area on Spitsbergen (Svalbard) that the government had granted to it.

State Visits. King Olav V paid visits to Iran and Thailand during the year. King Baudouin and Queen Fabiola of Belgium, President Giuseppe Saragat of Italy, and President Tito of Yugoslavia paid state visits to Norway.

THOR GJESTER
City Editor, "Norwegian Journal of Commerce and Shipping," Oslo, Norway

NORWAY · Information Highlights

ASIA
EUROPE
AFRICA

Area: 125,181 square miles.
Population: 3,695,000 (July 1, 1964, est.).
Chief Cities (1964 est.): Oslo, the capital, 484,747; Bergen, 117,007.
Government: *King*—Olav V; *premier*—Per Borten (took office Oct. 12, 1965). *Parliament*—Storting (150 members); party seating (1965)—Labor, 68; Conservative, 31; Center, 18; Liberal, 18; Christian People's, 13; Socialist, 2.
Religious Faiths: Evangelical Lutherans, 96% of population; others, 4%.
Education: *Literacy rate* (1962)—99% of population. *Total school enrollment* (1962)—656,493 (primary, 420,154; secondary, 165,852; teacher-training, 5,511; technical, 52,519; higher, 12,457).
Finance (1965 est.): *Revenues*, $1,439,500,000; *expenditures*, $1,560,000,000; *public debt* (1963), $1,469,500,000; *monetary unit*, krone (7.14286 kroner equal U.S.$1).
Gross National Product (1964): $6,256,000,000.
National Income (1964): $4,846,000,000; average annual income per person, $1,312.
Economic Indexes (1964): *Industrial production*, 142 (1958=100); *agricultural production*, 105 (1956–57=100); *cost of living*, 120 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,516,000; crude steel, 615,000; gasoline (1963), 329,000; aluminum, 252,599; wheat flour (1962), 192,000; meat (1962), 133,000.
Crops (metric tons, 1964): Potatoes, 804,000; barley, 503,000; oats, 106,000; apples, 51,000; tomatoes (1963), 8,000; pears, 6,000; rye, 2,000.
Minerals (metric tons, 1964): Magnesium, 22,680 (ranks 3rd among world producers); iron ore, 2,051,000; pyrites, 709,000; coal, 443,000; titanium, 271,798; peat, 146,000; lime, 110,000; feldspar, 66,300; copper, 14,812; zinc, 11,850; graphite (1963), 7,600; mica, 3,992; lead, 3,600; molybdenum, 201.
Foreign Trade (1964): *Exports*, $1,291,000,000 (chief exports: manufactured goods, $361,000,000; aluminum, $124,000,000; paper, $120,000,000; fish, $119,000,000); *imports*, $1,984,000,000 (chief imports, 1963: ships and boats, $315,000,000; nonelectrical machinery, $191,000,000; electrical machinery, $102,000,000). *Chief trading partners* (1963): Britain (took 18% of exports, supplied 16% of imports); Sweden (took 14% of exports, supplied 19% of imports); West Germany (took 15% of exports, supplied 17% of imports).
Transportation: *Roads* (1964), 33,324 miles (3,127 paved); *motor vehicles* (1964), 491,819 (automobiles, 364,366); *railways* (1963), 2,738 miles; *merchant vessels* (1964), 1,377 (14,303,000 gross registered tons); *national airline*, Scandinavian Airlines System; *principal airport*, Oslo.
Communications: *Telephones* (1964): 838,223; *television stations* (1964), 17; *television sets* (1964), 400,000; *radios* (1963), 1,060,000; *newspapers* (1963), 82 (daily circulation, 1,424,000).

NOVA SCOTIA

Nova Scotia continued its economic expansion during 1965, despite a slight downward trend in some areas of the economy. The number of jobs in the province increased, although unemployment still remained at a fairly high level. Labor income rose substantially during the year, spurred by the establishment of a minimum-wage scale for male workers in Nova Scotia—the first time such a guideline has been applied.

Economy. The primary sectors of the economy showed only slight growth during 1965. Farm cash receipts, the value of seafish landings, and pulpwood consumption made some gains, while the production of coal, pulpwood, and sawn lumber declined. Electric power output expanded rapidly.

Factory shipments by manufacturers increased moderately. Some expansion in the sale of primary steel, substantial gains in petroleum refining, and a moderate growth in shipbuilding and repair were key factors in maintaining economic stability. Fish processing showed the largest production gain because of an increase in the number of plants during the year.

Manufacturing. Industry expanded at a rapid pace in 1965. The Clairetone Sound Corporation began construction of an $8 million television and electronics equipment plant in New Glasgow. Canadian Motor Industries Limited announced plans for a second car assembly plant. Scott Maritimes Pulp Limited established a $50 million kraft pulp plant near Pictou. Also under construction was a $30 million heavy water plant at Glace Bay, several fish-processing plants, and a $7 million hardboard plant at Amherst.

NOVA SCOTIA · Information Highlights

Area: 21,425 square miles.
Population: 760,000 (Oct. 1, 1965, est.).
Chief Cities (1961 census): Halifax, the capital (92,511); Dartmouth (46,966); Sydney (33,617); Glace Bay (24,186); Truro (12,421); Amherst (10,788).
Government: *Chief Officers*—Lieutenant governor, Henry P. McKeen; premier and min. of educ., Robert L. Stanfield; prov. secy., Gerald J. Doucet; atty. gen., Richard A. Donahoe; min. of finance, George I. Smith; chief justice, J.L. Ilsley. *Legislature*—Legislative Assembly (convened Feb. 10, 1965), 43 members (39 Progressive Conservatives, 4 Liberals).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 194,410 pupils (7,400 teachers); private, 6,212 (289); college and university (1962–63), 7,034 students. *Public school expenditures* (1963)—$56,774,000; average teacher's salary, $3,890.
Public Finance (fiscal year 1965 est.): *Revenues*, $124,480,000 (sales tax, $40,940,000; income tax, $16,375,000; federal funds, $41,121,000). *Expenditures*, $141,660,000 (health and welfare, $38,440,000; education, $37,060,000; transportation and communications, $31,390,000).
Personal Income (1964): $1,035,000,000; average annual income per person, $1,360.
Public Assistance (fiscal year 1965 est.): $9,610,000 (aged and blind, $2,800,000; dependents and unemployed, $4,850,000).
Labor Force (1961 census, agricultural and manufacturing only): *Agricultural*, 12,433; *manufacturing*, 27,078.
Manufacturing (1962): *Value added by manufacture*, $182,865,000 (transportation equipment, $23,756,000; nonelectrical machinery, $1,293,000; fabricated metals, $9,867,000; food and products, $50,233,000).
Agriculture (1964 est.): *Cash farm income*, $43,910,000 (livestock, $34,935,000; crops, $6,300,000). *Chief crops* (cash receipts)—fruits, $3,166,000 (ranks 4th among the provinces); potatoes, $592,000 (rank, 8th); tobacco, $118,000 (rank, 4th).
Mining (1964 est.): *Production value*, $66,952,434. *Chief minerals* (tons)—coal, 4,343,606 (ranks 1st among the provinces); salt, 430,633 (rank, 2nd); sand and gravel, 6,439,028 (rank, 6th); stone, 428,940 (rank, 5th); lead, 1,475 (rank, 7th); silver, 539,801 troy ounces (rank, 9th).
Fisheries (1964): *Commercial catch*, 518,275,000 pounds ($40,890,000). *Leading species*—lobster, 19,085,000 ($11,975,000); scallops, 15,979,000 ($7,024,000); haddock, 88,765,000 ($5,393,000); cod, 108,514,000 ($4,847,000).
Transportation: *Roads* (1962), 15,374 miles (10,127 surfaced); *motor vehicles* (1963), 212,034; *railroads* (1963), 1,315 miles; *airlines* (1963), 2 (5 airports).
Communications (1963): *Telephones*, 197,903; *television stations*, 3; *radio stations*, 17; *newspapers*, 6 (daily circulation in September 1964, 155,177).

Nonindustrial Construction. New hospital units were added to existing facilities at Amherst, Glace Bay, Bridgewater, Digby, Truru, New Glasgow, and Halifax. A law school building was added at Dalhousie University, and a women's residence was built at Mount Saint Vincent College. In Halifax a 21-story apartment building neared completion. The provincial government completed a $30 million highway construction program.

Legislation. To implement the provisions of the Minimum Wage Act of 1964, a government board established the province's first system of minimum wages for male workers.

An act was passed to ensure that creditors fully inform borrowers of their obligations and of the cost of loans.

The Forest Improvement Act of 1965 was expected to contribute to the long-term growth and preservation of the province's forest resources by providing an instrument for enforcing forest management. Major provisions of the act include the appointment of district forest practices improvement boards, licensing of commercial wood buyers, and prohibitions against cutting immature woodstands.

Education. The provincial government announced plans to develop a comprehensive school system that will coordinate various school programs (academic, vocational, and other) in separate institutions to provide better facilities than are presently available in small neighborhood schools. The proposed program will triple vocational training-school capacity from 3,000 to 9,000 pupils through the construction of five new units.

Social Development. A new Division of Social Development was established in the provincial Department of Public Welfare to give greater impetus to the government's program on human rights. This unit will establish self-help community development programs in designated areas.

K. SCOTT WOOD
Economic Research Associate, Institute of Public Affairs, Dalhousie University

NUCLEAR ENERGY. See ATOMIC ENERGY; PHYSICS.

NUREYEV, Rudolf. See biographical sketch under DANCE.

NUTRITION

A principal development in nutrition during 1965 was the perfecting of a new and inexpensive process for the mass production of protein, the food element most needed to correct the insufficient diet from which a majority of the world's population suffers. In vitamin research, it was discovered that vitamin E can eliminate anemia in premature babies. Another finding was that the astronauts' synthetic diet is helpful in treating severe liver disease.

Also in 1965, nutritional changes were made in the American programs for sending food to underdeveloped countries. Food shipped abroad under these programs was being enriched and fortified to meet specific nutritional needs, and a beginning was made toward helping less-developed nations establish their own sources of needed foods and special nutrients.

Protein. Recent studies by the Food and Agricultural Organization (FAO) and the World Health Organization (WHO) of the United Nations indicate that over 80% of the world's people receive insufficient protein, and that about 60% are virtually starved for protein. A report prepared for President Johnson stated that kwashiorkor—resulting from protein malnutrition—is evident in as many as 50% of infants up to 5 years of age in some of the less-developed countries, and that this apparently causes mental and physical retardation of from 10% to 25% of those who survive.

A new process for mass producing protein at low cost will help supply sufficient quantities to persons who presently have too little of this nutrient in their diets. In the new process, whole fish are finely ground, purified, and dried to form a light gray flourlike concentrate called fish flour, which is almost without odor or taste. Both the fish and the processing are so inexpensive that protein for a typical undernourished child can be provided for about 4 cents per day, including commercial profit.

The production of fish flour as a protein supplement has been under study for several years. A major deterrent to making it available was the lack of an economical method for purifying whole-fish flour to make it edible. Scientists of the Commercial Fisheries Bureau of the Department of the Interior applied themselves to the purification problem, and in 1965 perfected a process in which three washings in isopropyl alcohol remove all fatty substances and bacteria, and most of the moisture. The resulting fish concentrate is 80% protein, the balance providing small amounts of calcium, phosphate, and other minerals useful in the diet.

The National Academy of Sciences estimated that the current annual world harvest of 50 million tons of fish could be increased to 250 million tons, using standard fishing techniques, and that the catch would yield 50 million tons of fish flour, enough to end protein deprivation throughout the world. (See also FOOD SUPPLY.)

Astronauts' Synthetic Diet. Dr. Milton Winitz of the United Technology Center, Sunnyvale, Calif., reported that patients with severe kidney or liver damage, as well as healthy volunteers, have thrived for periods up to 19 weeks on the synthetic diet developed for astronauts. No weight loss occurred and the physical condition and psychological outlook improved. The diet consists of pure chemicals: mineral salts, amino acids, vitamins, glucose, ethyl linoleate, and distilled water.

Vitamins. Many foods customarily have been enriched with vitamin D to prevent rickets. Committees of the American Council on Pediatrics and the American Medical Association reported that 400 USP units of vitamin D per day satisfy all requirements, and that excessive amounts are at best useless. They recommended to the Food and Drug Administration that restrictions on excessive use be imposed, and on Aug. 27, 1965, the agency published a proposal to limit vitamin D to a level of 400 USP units per day in milk, milk products, baby formulas, and nonprescription vitamin pills, and to eliminate it from other foods.

Premature babies are so prone to anemia that it was thought to be a normal result of premature birth. In 1965, however, research physicians and scientists at the University of Pennsylvania reported the discovery that anemia in these infants can be eliminated by giving them vitamin E. Because this essential vitamin is difficult to transfer from mother to baby before birth, all babies are born with only limited amounts of the vitamin in their systems. In the case of full-term babies, however, breast feeding usually increases their vitamin E supply to the proper level within a month after birth. Although vitamin E will cure anemia in premature babies, its full effects are not known, and further studies are being conducted to make sure that there are no undesirable side effects.

Enriched Food for Foreign Aid. In the past, food shipped to less-developed countries by the United States has usually been whatever was in surplus supply. However, at the Western Hemisphere Nutrition Congress held in Chicago in November, the Agency for International Development (AID) announced that foods sent abroad since August 1965 have been enriched to meet specific nutritional deficiencies. Vitamins A and D are being added to dried skim milk, and calcium, thiamin, riboflavin, niacin, and iron are being used to fortify wheat flour and cornmeal. Previously, surplus food programs had been directed toward improving the nutrition of school children, but now they concentrate on improving the diets of preschool children in an effort to prevent physical and mental deterioration that is directly attributable to diet deficiencies during early childhood.

Beginning in January 1966, AID was conducting a many-faceted experimental program in underdeveloped nations in an effort to help these countries help themselves. In addition to increasing local production of food, the participating countries started commercial distribution of a grain-based food enriched with vitamins, minerals, and protein. These additives—to be obtained locally if available, but otherwise to be supplied by AID—were mixed with the grain by local processors during milling. Participating governments were urged to set permanent standards for enriching foods, to initiate research leading to the development of low-cost local protein sources, and to encourage the establishment of local commercial storage and distribution facilities. The overall aim was to help less-developed countries contribute to their own development, so that they eventually can free themselves from the need for charity.

Undernourished Americans. Surveys in North America in 1965 indicated that while most people in the United States and Canada enjoy excellent nutrition levels, a large percentage of three population groups —teenage girls, the aged, and steady social drinkers —have nutritionally substandard diets, mainly because of a poor choice of food. The last group lacks a sufficient supply of B-complex vitamins.

The reducing-diet fad of the year was "the drinking man's diet," so called because it advised overweight people to reduce carbohydrate intake, but not to worry about high-calorie foods such as alcohol. Nutritionists warned against the possible bad effects of this diet on blood, heart, liver, and kidneys.

Other Research. An ancient belief of cannibals that one acquires the abilities of a superior person by eating him found support for the first time in a laboratory experiment conducted in 1965. Researchers found that untrained worms, after eating pieces of trained worms, could pass complicated tests that the trained worms had passed, but which the untrained worms could not pass before the meal. The scientific significance of this discovery is that synthesized biochemical materials may some day be fed to people with disoriented memory patterns, thereby perhaps helping restore them to mental health.

ROBERT A. PETERMAN
Secretary, American College of Nutrition

NYASALAND. See MALAWI.

NYERERE, Julius Kambarage. See biographical sketch under TANZANIA.

OBITUARIES. For a list of prominent persons who died in 1965, see the NECROLOGY on pages 757–768.

O'BRIEN, Lawrence F. See biographical sketch under UNITED STATES.

OCEANIA. See PACIFIC ISLANDS.

OCEANOGRAPHY

Significant developments in oceanography in 1965 included the U.S. Navy's second man-in-the-sea experiment, further development of deep submersibles, and the discovery of deep pools of very hot, salty water at the bottom of the Red Sea. Other important developments in research included the analysis of long-traveling ocean waves, new methods of measuring the amount of water transported by ocean currents, and the first phase of a cooperative international survey of the Kuroshio Current, Japan's "Gulf Stream."

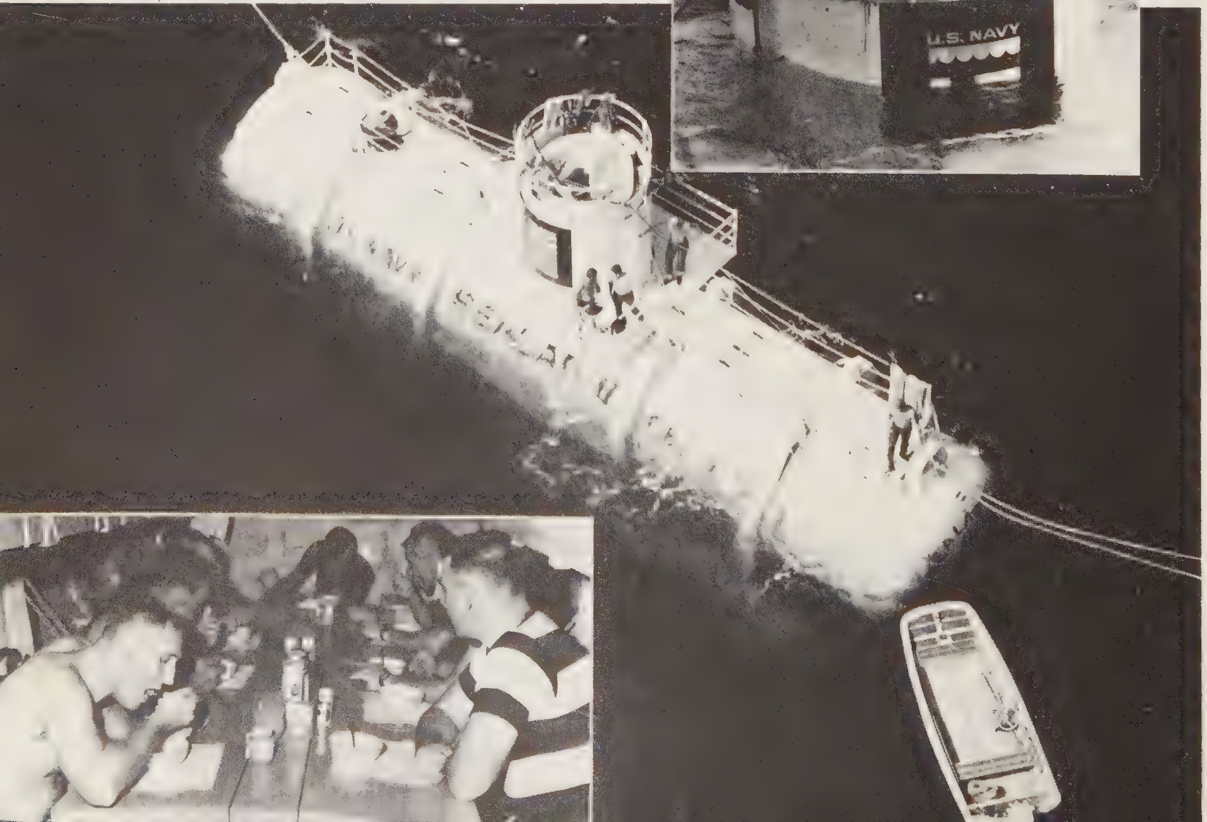
Sealab II. As part of the U.S. Navy's man-in-the-sea program, three 10-man teams lived for successive 15-day periods in a 12-by-50-foot undersea laboratory, called *Sealab II,* at a depth of 205 feet beneath the surface. Comdr. Scott Carpenter, the astronaut, who was the leader of both the first and second teams, stayed down 30 days. The 45-day test (from Aug. 28 to Oct. 12) was made on the continental shelf off La Jolla, Calif. The purpose of the experiments was to learn how to explore and use the continental shelf areas of the oceans, and to demonstrate that man can live in an underwater environment for prolonged periods. The astronauts lived in close quarters aboard *Sealab II.*

The teams not only lived at great depth but also performed various tasks. They explored and mapped the continental shelf and submarine canyons down to 300-foot depths; caught and ate fish, crabs, and plankton; measured water currents and water temperature; tested new salvage methods, including foam and explosive devices, and tested air-lift and bottom-coring techniques. They also conducted various physiological and marine biological experiments.

Red Sea Basins. Basins at the bottom of the Red Sea have been found to contain extremely warm and highly saline water. These basins are about 200 meters below surrounding areas that lie at depths of about 2,000 meters. Water temperatures as high as 44.9° C (113° F.) were found near the bottom of the basins, beneath water that had a tempera-

UNITED PRESS INTERNATIONAL PHOTO

SCOTT CARPENTER (*right*), Navy astronaut and aquanaut, gives signal to lower *Sealab II* to the sea bottom. Carpenter was the leader of two 10-man aquanaut teams in the underwater laboratory for 30-day period, Aug.–Sept. 1965.



SEALAB II (*below*) is an underwater laboratory in which aquanaut teams of 10 men lived for 15 days at the sea bottom in the Navy's second man-in-the-sea program. Interior view (*lower left*) shows aquanauts eating soup while submerged at 205 feet.

UNITED PRESS INTERNATIONAL PHOTO; INSET, OFFICIAL U.S. NAVY PHOTO, KEYSTONE PRESS AGENCY ture of about 22° C (71.6° F.). The salt content of the basin water was about 25.5 percent by weight, while the water above the basin water had a salt content of about 4 percent by weight. The various components of the salt content of the basin water were present in slightly different relative proportions than in ordinary sea water. Three possible explanations for the origin of the basin water have been suggested: (1) it originated from local evaporation in coastal regions and sank because of its high salt content and density; (2) it originated from an old salt deposit at the sea bottom; or (3) it originated from interstitial water of older sediments.

Long-Traveling Ocean Waves. Waves formed by storms in the Indian Ocean have been traced across the Pacific Ocean as far as Alaska—halfway around the world. Five land observation stations were selected along a great-circle route, beginning at New Zealand and continuing through Samoa, Palmyra, Honolulu, and Yakutat, Alaska. In addition, the specially designed research vessel *Flip* was positioned between Honolulu and Yakutat. Wave records clearly showed that waves formed by Indian Ocean storms traveled progressively along the line of stations. Various changes in wave characteristics were recorded as the waves moved farther away from their source.

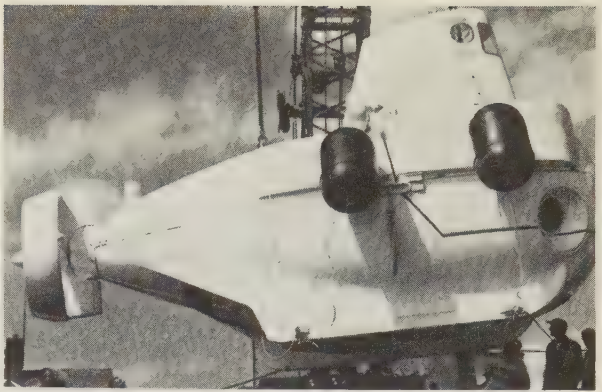
Deep Submersibles. Progress has been rapid toward a wider exploration of the sea by deep submersibles. Two deep-diving vessels, the *Alvin* (U.S. Navy) and the *Aluminaut* (Reynolds International, Inc.) have been successfully tested near Miami, Fla. The *Alvin* dived to 6,000 feet in 2½ hours, remained on the bottom for 20 minutes, and surfaced two hours later. This vessel, which is 22 feet long and 8 feet wide, is designed for a submerged cruising range of 20 to 25 miles at a speed of 2½ knots, with a maximum speed of 6 to 8 knots.

The *Aluminaut* has remained submerged for as long as 33 hours, reaching depths as great as 2,750 feet. During this period, it traveled 70 miles at speeds up to 3½ knots. The 51-foot-long vessel, which was designed for diving to depths of 15,000 feet, went to a depth of 6,250 feet late in 1965.

Ocean Current Measurements. A new method has been used to measure the amount of water that is transported per unit width of ocean current. Measurements have been made in the Straits of Florida by dropping a free instrument that sinks either to the bottom or to a given depth, and then returns to the surface for recovery. If the drop point, rate of fall, rate of rise, and recovery point are known, then the average current speed of the water through which the instrument passed can be calculated. By dropping several of these instruments to different depths, the total flow and the average flow can be determined.

AQUANAUTS feed Tuffy the porpoise, which ran errands and messages from submerged *Sealab II* to the surface.

UPI


U.S. NAVY

OCEANOGRAPHIC SUBMARINE *Alvin* houses a two-man crew in a steel sphere within its molded fiberglass hull.

Kuroshio Current. The first phase of an international cooperative study of the Kuroshio Current began in 1965. The countries taking part in the program are Japan, the Soviet Union, the United States, the Philippines, Great Britain, South Korea, and Nationalist China. The first phase (July 1965 to March 1966) includes synoptic surveys of the area from 5° to 43° north latitude and from the eastern shores of the Philippines, Taiwan, the Ryukyu Islands, and Japan to points about 600 miles to the east. The study area also includes the Sea of Japan. In particular areas, the study includes regular monitoring of the seasonal changes of the Kuroshio Current and closely spaced observations of the high-frequency fluctuations of the current. A major purpose of the study is to understand the relationship between fishing grounds and ocean currents.

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Scripps Institution of Oceanography

OHIO

Reapportionment of the Ohio Senate and House of Representatives was bogged down by controversy during 1965. The legislature did succeed, however, in reapportioning the federal congressional districts of the state late in 1964.

Reapportionment. In 1964, Ohio was ordered by a U.S. district court to reapportion the state House of Representatives. A special legislative session, called in November by the Republican governor, James A. Rhodes, worked out a reapportionment plan which was submitted to the voters as a proposed constitutional amendment in the May 1965 primaries. There was strong opposition to the plan in big cities and among Democratic and labor leaders. They charged that the lame duck special session, which included many Republicans who had lost their seats in the General Assembly in the 1964 elections, had rushed through an inequitable reapportionment plan. The plan was rejected by the voters. At its regular session, from January through August 1965, the assembly failed to agree on a new plan, and the problem was turned over to an apportionment board.

WIDE WORLD

AFTER TORNADOES STRUCK OHIO on April 11, killing more than 50 persons, residents of Pittsfield, a rural community in Lorain County southwest of Cleveland, inspect the ruins of their homes. Pittsfield's town hall, its two churches, and most of its homes were demolished.

In a surprise decision on September 16, three federal court judges ordered the state Senate, as well as the House of Representatives, to be reapportioned by October 16. The apportionment board arrived at a formula for House and Senate reapportionment which was challenged by Democratic leaders. In November the federal court refused to postpone implementation of its apportionment order, and accepted the board's formula for use in the 1966 elections. An appeal to the United State Supreme Court was imminent.

OHIO · Information Highlights

Area: 41,222 square miles.
Population: 10,372,000 (1965 est.).
Chief Cities (1965 est.): Columbus, the capital (540,000); Cleveland (855,000); Cincinnati (495,000); Toledo (354,000); Akron (298,000); Dayton (260,000); Youngstown (162,000); Canton (110,000).
Government: *Chief Officers*—governor, James A. Rhodes (Republican); lt. gov., John W. Brown (R); secy. of state, Ted W. Brown (R); atty. gen., William B. Saxbe (R); treas., John D. Herbert (R); supt. of pub. instr., Edward E. Holt; chief justice, Kingsley A. Taft. *Legislature*—General Assembly (convened Jan. 4, 1965); Senate, 32 members (16 Republicans, 16 Democrats); House of Representatives, 137 members (75 R, 62 D).
Education: *School enrollment* (1964–65)—public elementary, 1,446,460 pupils (50,900 teachers); public secondary, 824,960 pupils (35,100 teachers); nonpublic schools, 435,500 pupils (11,090 teachers); college and university (fall 1964), 247,948 students. *Public school expenditures* (1964–65)—$978,000,000 ($469 per pupil); average teacher's salary, $6,050.
Public Finance (fiscal year 1964): *Revenues,* $2,309,524,000 (sales tax, $296,353,000; motor fuel tax, $235,501,000; federal funds, $402,376,000). *Expenditures,* $1,949,108 (education, $375,085,000; health, welfare, and safety, $231,995,000; highways, $522,984,000). *State debt,* $105,523,000 (1964).
Personal Income (1964): $26,728,000,000; average annual income per person, $2,646.
Public Assistance (fiscal year 1965): $216,950,397 to 366,700 recipients (aged, $87,742,437; dependent children, $69,887,830).
Labor Force (employed persons, July 1965): *Agricultural,* 153,000; *nonagricultural* (wage and salary earners), 3,335,000. *Unemployed persons* (July 1965)—124,000.
Manufacturing (1963): Value added by manufacture, $15,443,018,000 (transportation equipment, $2,458,182,000; primary metals, $2,254,048,000; nonelectrical machinery, $1,919,086,000; electrical machinery, $1,537,194,000; fabricated metals, $1,332,813,000; food and products, $1,018,270,000).
Agriculture (1964): *Cash farm income,* $1,114,674,000 (livestock, $627,606,000; crops, $431,162,000; govt. payments, $55,906,000). *Chief crops* (tons)—corn for grain, 5,389,000 (ranks 6th among the states); hay, 3,480,000 (rank, 13th); alfalfa, 1,993,000 (rank, 15th); wheat, 1,359,000 (rank, 12th); oats, 580,000 (rank, 7th); sugar beets, 400,000 (rank, 14th); potatoes, 118,250 (rank, 17th).
Mining (1964): *Production value,* $454,937,000 (ranks 14th among the states). *Chief minerals* (tons)—coal, 37,310,000 (rank, 5th); clays, 5,005,000 (rank, 1st); salt, 4,537,000 (rank, 4th); lime, 3,664,000 (rank, 1st); natural gas, 37,309,000,000 cubic feet (rank, 15th); petroleum, 15,859,000 barrels (rank, 17th).
Transportation: *Roads* (1965), 105,860 miles (76,363 paved); *motor vehicles* (1964), 5,061,333; *railroads* (1963), 8,176 miles; *airlines* (1964), 13 (441 airports).
Communications (1964): *Telephones,* 4,768,200; *television stations,* 27; *radio stations,* 182; *newspapers,* 96 (daily circulation, 3,349,258).

Legislative Action. Besides the unsuccessful reapportionment amendment, the special session of the General Assembly submitted three other proposed constitutional amendments to voters in the May primary. All three were approved. One amendment allowed a $290 million capital improvements bond issue; the second permitted the state to provide industrial expansion loans; and the third validated the state's guarantee of loans to college students, a program created by the legislature in 1961. Among the capital improvements that will be financed by the bond issue are a new state penitentiary, a new medium-security prison at Grafton, new state universities at Cleveland and Dayton, and a new medical school at Toledo.

The General Assembly's work in its regular session was slowed down because the Senate was equally divided between Republicans and Democrats. It did approve appropriations for extensive capital improvements and for increased operating funds for schools and colleges. The Department of Public Welfare was reorganized, a more rigid strip-mining law was passed, and pay raises were provided for many public employees. The governor's salary was increased from $25,000 to $40,000, effective in 1967. An old statute banning the sale and distribution of birth control devices was repealed.

Two especially controversial laws were passed after hot debate. One measure provided bus transportation for parochial school students; the other was a fair-housing bill prohibiting racial discrimination in sales or rental of housing, except in owner-occupied residential dwellings of two units or less. The bussing law, advocated by Catholic groups, was challenged, and an appeal to the courts was indicated.

November Elections. In mayoralty contests, Republicans replaced Democrats in Akron and Lima, and Democrats replaced Republicans in Elyria, Coshocton, Newark, and Marietta.

The voters approved a constitutional amendment allowing judges in counties of less than 40,000 population to preside in more than one court below the level of the State Court of Appeals. However, they overwhelmingly defeated a proposal that would have provided funds for education by increasing the state retail and use taxes from 3% to 4%.

Storm. A violent windstorm on April 11 (Palm Sunday) killed over 50 people in the state, and caused millions of dollars in property damage. Especially hard hit were Allen, Hancock, Lorain, and Lucas counties—all in the northern part of the state. (See also CLEVELAND.)

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OIL. See Petroleum.

OKINAWA. See Pacific Islands.

OKLAHOMA

Because of irregularities attributed to two members of the 9-member State Supreme Court and the rejection by voters of proposals to finance urgently needed services, Oklahoma received unfavorable publicity during 1965.

State Justices. On March 22, State Supreme Court Justice Earl Welch submitted his resignation only a few hours before an investigating committee was to bring recommendations for his impeachment before the House of Representatives. Welch, who had served on the court since 1933, was charged with income tax evasion. Two days later the House voted articles of impeachment against Justice N.B. Johnson, a 16-year veteran of the court. On May 23 the Senate sustained the two charges of bribery against him by a vote of 32 to 15—one vote over the required two-thirds majority.

Public Finances. Early in January, Oklahoma's first Republican governor, Henry Bellmon, submitted his first proposed fiscal program, known as Giant Stride, to the 30th Legislature. Since the governor pledged during his political campaign in 1962 not to introduce new taxes, his proposed program provided for a $500 million bond issue to take care of the increased cost of general government services, teachers' salaries, road improvements, and construction.

OKLAHOMA · Information Highlights

Area: 69,919 square miles.
Population: 2,512,000 (1965 est.).
Chief Cities (1965 est.): Oklahoma City, the capital (380,000); Tulsa (280,000); Lawton (70,500); Midwest City (46,000); Norman (46,000); Enid (40,000); Muskogee (38,000); Bartlesville (30,000).
Government: *Chief Officers*—governor, Henry Bellmon (Republican); lt. gov., Leo Winters (Democrat); secy. of state, James M. Bullard (D); atty. gen., Charles R. Nesbitt (D); treas., C.P. Williams (D); supt. of pub. instr., Oliver Hodge (D); chief justice, Harry L.S. Halley. *Legislature*—Oklahoma Legislature (convened Jan. 5, 1965); Senate, 48 members (41 Democrats, 7 Republicans); House of Representatives, 99 members (78 Democrats, 21 Republicans).
Education: *School enrollment* (1964–65)—public elementary, 350,000 pupils (12,300 teachers); public secondary, 250,000 pupils (10,000 teachers); nonpublic schools, 24,600 pupils (950 teachers); college and university (fall 1964), 79,051 students. *Public school expenditures* (1964–65)—$200,000,000 ($366 per pupil); average teacher's salary, $5,160.
Public Finance (fiscal year 1965): *Revenues*, $586,268,912 (2% sales tax, $66,018,747; gasoline and fuels excise tax, $65,507,545; federal funds, $187,655,444). *Expenditures*, $611,821,717 (education, $191,915,524; health, welfare, and safety, $215,348,763; highways, $152,463,358). *State debt*, $68,300,000 (June 30, 1965).
Personal Income (1964): $5,134,000,000; average annual income per person, $2,083.
Public Assistance (fiscal year 1964): $156,847,000 (aged, $75,972,000; dependent children, $26,946,000).
Labor Force (employed persons, July 1965): *Agricultural*, 131,000; *nonagricultural* (wage and salary earners), 641,900 (15.9% manufacturing, 22.7% trade, 22.5% government). *Unemployed persons* (July 1965)—35,800.
Manufacturing (1963): Value added by manufacture, $965,305,000 (transportation equipment, $65,391,000; primary metals, $45,094,000; nonelectrical machinery, $105,958,000; electrical machinery, $106,702,000; fabricated metals, $84,366,000; food and products, $148,586,000).
Agriculture (1964): *Cash farm income*, $692,033,000 (livestock, $373,327,000; crops, $250,748,000; govt. payments, $67,958). *Chief crops* (tons)—wheat, 2,899,000 (ranks 3rd among the states); hay, 2,450,000 (rank, 19th); sorghum grain, 412,000 (rank, 5th); barley, 316,000 (rank, 8th); oats, 133,000 (rank, 17th); peanuts, 88,000 (rank, 6th); rye, 24,000 (rank, 8th); pecans, 15,000 (rank, 1st); cottonseed, 130,000; corn for grain, 71,300.
Mining (1964): *Production value*, $881,270,000 (ranks 5th among the states). *Chief minerals* (tons)—gypsum, 694,000 (rank, 6th); zinc, 12,159 (rank, 15th); lead, 2,781 (rank, 9th); petroleum, 202,524,000 barrels (rank, 4th); natural gas, 1,323,390,000,000 cubic feet (rank, 3rd); helium, 230,673,000 cubic feet (rank, 2nd); helium, 230,673,000 cubic feet (rank, 2nd); bituminous coal, 1,028,000.
Transportation: *Roads* (1965), 105,545 miles (53,365 paved); *motor vehicles* (1964), 1,210,067; *railroads* (1965), 5,842 track miles; *airlines* (1965), 6 (198 airports).
Communications (1965): *Telephones*, 1,070,800; *television stations*, 9; *radio stations*, 68; *newspapers* (1964), 52 (daily circulation, 859,736).

The Legislature, however, did not approve the governor's program. Instead, it submitted a three-part program, which included a 1-cent increase in the 2-cent sales tax to furnish revenue for the public school system, and two bond issues for building construction and highway needs. The voters overwhelmingly rejected these proposals in a special election on April 27.

A referred measure was then put to the voters in a statewide election on December 14. The measure, which provided funds for building equipment for new state institutions and renovation of old buildings, was carried by a majority of 3 to 1.

Education. In May the National Education Association (NEA) censured the Oklahoma public schools, citing alleged "sub-minimal" working conditions for teachers in the state. The NEA offered to help teachers find teaching positions in other states, and admonished teachers in other states not to apply for positions in Oklahoma. Few teachers left the state, however, and the NEA later lifted the sanctions it had imposed.

Many Oklahoma teachers who had expected a minimum annual salary increase of $1,000 were disappointed when the Legislature provided only half of that amount. Hope for educational improvements was kept alive, however, by legislative action.

Oilwell Fire. Shortly before daylight on Aug. 14, 1964, a wildcat oilwell blew out near Canton in northwestern Oklahoma. Gas from the well ignited, destroying the $250,000 drilling rig and nearby equipment. Fueled each day by about 3 million cubic feet of gas, the fire was not brought under control until June 11, 1965.

Memorials. The National Cowboy Hall of Fame and Western Heritage Center was dedicated on June 26. Located on a hill in Oklahoma City, the modernistic building was sponsored jointly by 17 Western states. The facility is a memorial to the courageous men and women who built the West.

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OLD AGE

The year 1965 brought striking advances in legislation aimed at relieving the problems of older Americans. In rapid succession, Congress passed the Older Americans Act, the Medicare amendments to the Social Security Act, legislation creating a nationwide system of health centers, and new housing legislation to benefit senior citizens. Other programs, enacted or begun in 1964, moved into the action stage during 1965.

Older Americans Act. The Older Americans Act, signed by President Johnson on July 14, created an Administration on Aging within the U.S. Department of Health, Education, and Welfare. The new administration, under the direction of a commissioner appointed by the president, will serve as an information clearinghouse and will provide technical consultation services for organizations and agencies working on behalf of older people. The administration will also prepare educational materials and administer two grant programs. The grants include $5 million appropriated to support planning and coordination at the state level and community projects, and $1.5 million for research,

UPI

SENIOR CITIZENS were urged to meet in support of the 1965 Medicare bill. At such a meeting in Washington, D.C., Sen. Thomas Kuchel (Calif.) discusses details of the bill.

demonstration programs, and training professional personnel.

Medicare. On July 30, President Johnson signed amendments to the Social Security Act that provide hospital, extended care, and home services to all persons aged 65 and over. The Medicare amendments also provide a voluntary program of physicians', surgeons', and other services to those who elect coverage. The Medicare legislation was hailed as the greatest advance in the Social Security program since its enactment in 1935. (See MEDICARE.)

Heart, Cancer, and Stroke Centers. Soon after the signing of the Medicare Act, Congress approved a $340 million program to provide some 25 regional health centers for study and treatment of heart disease, cancer, and stroke—the three major causes of illness and death among older people. Part of the appropriation will be used to train specialists who will work in community hospitals and teach local doctors in diagnosis and treatment of these conditions. The appropriation also covers the purchase of equipment. Payment for services rendered older people will be made largely from the medicare programs. (See also PUBLIC HEALTH.)

Mental Health. Congress appropriated funds in 1965 for salaries of personnel to be employed under the 1964 Community Mental Health Services Act. Another amendment to the Social Security Act provides for payment of public assistance benefits to patients in mental hospitals, with the stipulation that the hospitals use the money to improve welfare services. (See MENTAL HEALTH.)

New Housing Benefits. The Act that created the Department of Housing and Urban Development in August 1965, also increased authorizations for construction of low-rent housing, and appropriated funds for purchase, rehabilitation, and lease of existing housing for older people. Authorization for new construction under the Federal Housing Administration direct-loan program was increased to $500 million. The interest rate on mortgages insured under the program was fixed at 3%. A program of rent supplements to augment rental payments of low-income older people in certain existing housing was authorized. The act also provides a construction grant program for neighborhood centers. (See also HOUSING.)

Retirement Income Benefits. Retirement income benefits were increased 7%, effective retroactively to Jan. 1, 1965. Widows were made eligible for reduced benefits at age 60, and remarried widows were allowed one half of the former husband's benefit or a wife's benefit based on the earnings of her present husband. Under the new legislation, beneficiaries may earn up to $1,500 a year without losing benefits. To finance the new amendments, the maximum amount of earnings taxed to provide benefits was increased to $6,600.

Additional amendments increased the federal share of public assistance payments to needy persons by about $2.50 a month, increased to $50 a month the amount of earnings that may be disregarded in determining eligibility, and provided for payments to a third person if a recipient is unable to manage his own money.

At mid-1965, 13.9 million persons aged 65 and over were receiving monthly benefits under the Old-Age, Survivors, and Disability Insurance program. Another 1.9 million between 62 and 64 years of age also were beneficiaries. Average monthly benefits to retired workers increased from $78 to $84 following passage of the Social Security Medicare Amendments. Average benefits to wives or husbands of retired workers reached $44; to widows or widowers, $73; and to parents of retirees, $76.

Employment and Retirement. In 1965 the Department of Labor, in response to a 1964 congressional directive, published the results of a major investigation of discrimination against workers 45 to 64 years of age. The department recommended stepping up services to increase employment opportunities for these workers. Other studies indicated that management and labor are cooperating in extending opportunities for separation prior to age 60 without loss of retirement income. One of the major agreements of this kind became effective in the automobile industry in 1965. In an effort to stimulate retirement of older federal employees, Congress increased benefits by 6.1% for those who retired during November and December of 1965. An estimated 30,000 took advantage of the inducement.

The Economic Opportunity Program. Launched in 1964, this new program was the first of President Johnson's announced series of community programs that will employ low-income people 60 years of age and over. In most instances, older people will augment the staffs of facilities for orphans, the mentally retarded, and the aged, offering personal attention, companionship, and assistance. Benefits to the employed older person include the opportunity to serve the community while earning additional income for himself.

Professional Training. Several training programs were initiated to alleviate acute shortages of researchers, teachers, program planners, and professional service personnel in aging. The University of Southern California, the University of Georgia, and the University of Michigan together with Wayne State University created institutes or councils of gerontology. The National Institute of Child Health and Human Development, the Gerontology Branch of the Public Health Service, and the new Administration on Aging made several grants for training research and professional personnel.

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OMAN. See MUSCAT AND OMAN.

ONTARIO

Financial affairs and legislation dominated developments in Ontario during 1965. Stock market manipulations were probed by royal commissions, and the provincial legislature enacted a record number of laws.

Finance. In October the Royal Commission of Inquiry on Windfall Oils and Mines Limited submitted its study of the reasons for Windfall's failure following wild fluctuations of the company's stock on the Toronto Stock Exchange. The commission blamed the company's management and stock exchange executives for the resulting financial loss. Its findings are expected to bring about a further tightening of corporate and securities laws, which already had been revised in 1965. In June, anticipating the commission's report, the Toronto Stock Exchange announced new rules and suspended or removed 19 companies from its listing, and there was a further possibility that many others would be affected.

Another financial collapse—that of the Atlantic Acceptance Corporation Limited in June 1965—led to the establishment of another royal commission of inquiry. Atlantic, Canada's seventh largest finance company, defaulted on its short-term obligations. The repercussions were felt throughout Canada and abroad because of interlocking interests and Atlantic's vast assets. Fourteen other companies were bankrupted as a result of Atlantic's failure.

ONTARIO · Information Highlights

Area: 412,582 square miles.
Population: 6,794,000 (Oct. 1, 1965, est.).
Chief Cities (1963 est.): Toronto, the provincial capital (630,339); Hamilton (271,300); Ottawa, the federal capital (276,769); Windsor (112,049); London (171,116); Kitchener (80,283); Sudbury (79,987).
Government: *Chief Officers*—Lieutenant governor, William E. Rowe; premier, John P. Robarts (Progressive Conservative); prov. secy., John Yaremko (PC); atty. gen., Arthur A. Wishart (PC); treas., James N. Allan (PC); min. of educ., William G. Davis (PC); chief justice, Dana H. Porter. *Legislature*—Legislative Assembly (convened Jan. 20, 1965), 108 members (77 Progressive Conservative, 22 Liberal, 8 New Democrat; 1 Liberal-Labour).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 1,597,374 pupils (58,047 teachers); private, 41,721 (2,589); Indian, 6,815 (267); college and university (1962–63), 39,269 students. *Public school expenditures* (1963)—$741,213,000; average teacher's salary, $5,694.
Public Finance (fiscal year 1965 est.): *Revenues*, $1,293,530,000 (sales tax, $440,900,000; income tax, $398,819,000; federal funds, $19,941,000). *Expenditures*, $1,434,600,000 (education, $424,290,000; health and welfare, $397,050,000; transportation and communications, $302,300,000).
Personal Income (1964): $13,996,000,000; average annual income per person, $2,109.
Public Assistance (fiscal year 1965 est.): $71,420,000 (aged and blind, $18,460,000; dependents and unemployed, $37,820,000).
Labor Force (1961 census, agricultural and manufacturing only): *Agricultural*, 172,171; *manufacturing*, 643,728.
Manufacturing (1962): *Value added by manufacture*, $6,347,432,000 (transportation equipment, $729,103,000; primary metals, $758,069,000; nonelectrical machinery, $401,195,000; electrical machinery, $511,799,000; fabricated metals, $526,791,000; food and products, $848,775,000).
Agriculture (1964 est.): *Cash farm income*, $995,596,000 (livestock, $704,075,000; crops, $286,356,000). *Chief crops* (cash receipts)—tobacco, $92,369,000 (ranks 1st among the provinces); vegetables, $54,832,000 (rank, 1st); fruits, $32,967,000 (rank, 1st); wheat, $23,247,000 (rank, 4th); soybeans, $15,709,000 (rank, 1st); potatoes, $12,912,000 (rank, 2nd); flaxseed, $983,000 (rank, 4th).
Mining (1964 est.): *Production value*, $911,098,372. *Chief minerals* (tons)—copper, 201,031 (ranks 1st among the provinces); iron ore, 7,985,715 (rank, 3rd); sand and gravel, 75,333,285 (rank, 1st); cement, 2,975,590 (rank, 1st); gold, 2,135,269 troy ounces (rank, 1st); uranium, 12,035,382 pounds (rank, 1st); crude petroleum, 1,260,000 barrels (rank, 5th).
Transportation: *Roads* (1962), 77,143 miles (73,163 surfaced); *motor vehicles* (1964), 2,375,000; *railroads* (1963), 10,117 miles; *airlines* (1963), 3 (83 airports).
Communications (1963): *Telephones*, 2,639,749; *television stations*, 19; *radio stations*, 91; *newspapers*, 46 (daily circulation, September 1964, 1,757,816).

PICTORIAL PARADE

CAMPUS OF THE FUTURE IN TORONTO, at York University, is defined in this scale model, which incorporates the six first buildings (identified by small black markers).

Legislature. The provincial legislative session of 1965 was the longest ever held and one of the busiest. Parliament sat for 98 days and passed a record total of 175 bills. One of the most important was the Medical Services Insurance Act (effective June 1, 1966), providing for payment of doctors' fees and making subsidies available to families with a taxable income of $1,000 or less.

The legislature accepted a commission's report which recommended equalizing urban and rural representation by increasing the number of seats in the Legislative Assembly by nine, bringing the total to 117. The legislators also increased their salaries from $5,000 to $8,000 and voted allowances of $3,000 or $4,000 each for members living outside Toronto.

Other important legislation included: outlawing strikes in hospitals and instituting compulsory arbitration for Ontario hydroelectric workers; establishing community colleges; authorizing Canada's first government-sponsored rail commuter service (from Toronto to Burlington and Dunbar); approving a formula for amending the federal constitution; imposing stricter controls on used car sales and advertising; extending antidiscrimination laws; and adopting an Ontario flag (a red ensign with the provincial shield).

Economy. Ontario experienced continued economic growth during 1965. The province's share of the gross national product rose above the $18.5 billion reported for 1964; unemployment dropped below

1964's 3.3%; and the population growth exceeded that year's 2.2% increase. New starts in housing were estimated at 60,000—up almost 11% over 1964.

Education. The amalgamation of rural public school trustee boards into township area boards continued during the 1964–65 school year. By January 1965, 1,926 rural boards had been consolidated into 423 township boards. The province assumed control of schools for retarded children.

A Department of University Affairs was established to supervise higher education in the provinces. Three colleges were opened in September 1965: a new campus for York University; Scarborough College of the University of Toronto; and Wellington College of the University of Guelph. Construction was begun on a medical school at McMaster University, a dental school at the University of Western Ontario, a medical science center at Queen's University, and enlarged medical school facilities at the University of Toronto. The province's financial assistance to universities increased to $165 million.

Highways. The sharp rise in motor vehicle registrations during 1964 (up 5% over 1963, to 2,375,000) brought the total highway expenditures to $329.4 million in 1965. Highway 401 was renamed the Macdonald-Cartier Freeway, and its Toronto-Windsor section was completed as a four-lane road.

Politics. Two issues caused the government considerable embarrassment during 1965. One involved Frederick Fawcett, an Owen Sound farmer, who had been detained in a mental hospital for 3½ years despite a controversy over his sanity. Premier John P. Robarts promised to review his case, and Fawcett was released prior to the review. The second issue concerned procedures followed by the Upper Thames River Conservation Authority in expropriating land. Farmers affected by the authority's actions protested both the price and the procedure.

The Royal Commission on Civil Rights, formed as a result of the "Police Bill" protests in 1964, unearthed evidence of actual or possible infringements of civil liberties. Other commissions proposed reorganization of local government in the province, establishment of legal aid to give everyone an equal chance before the law, and reorganization of Toronto's metropolitan government.

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OPERA. See Music.
OPHTHALMOLOGY. See Blindness.

OREGON

In early 1965, Oregon dug out of debris left by disastrous floods along the Willamette River, and late in the year more floods occurred along the southern coast. Parched Southwestern states, seeking Oregon's excess water, hoped that the Columbia River might be tapped for their use in the future. The debate over possible water diversion promised to become a major political issue. Air and water pollution was another issue in state politics, with state Treasurer Robert Straub claiming that Gov. Mark Hatfield's administration had been lax in these matters.

Economy. Business boomed in the state during 1965. The amount spent during the year for construction of new plants and expansion of older facilities, totaled more than $100,000,000 for the third consecutive year. Employment and wages reached new heights, and retail sales approached $3 billion by year's end. The leading industry was lumbering, which had an output of $1.4 billion, for a gain of 4.3% over 1964. The growing tourist industry brought a record $250,000,000 into the state during 1965.

Mineral Resources. Ships drilled off the Oregon coast during the year in an effort to find oil. A U.S. Bureau of Mines study showed that the state's vast deposits of dune sand along the shore could provide raw material for the manufacture of glass.

Legislation. Two legislative sessions were held during the year. The regular session began in January, with a Republican majority in the House. The Senate, although controlled by the Democrats, was organized by the Republicans with the aid of a group of conservative Democrats.

The legislature passed 24 statutes. The two which attracted the most attention were an implied consent law requiring persons suspected of drunken driving to take a breath test, and a three-way insurance bill under which employers are permitted to provide injury insurance by means of state compensation, private insurance, or self-insurance.

At a special session called by the governor in May, the Legislature slightly redrew the boundaries of

OREGON · Information Highlights

Area: 96,981 square miles.
Population: 1,896,000 (1965 est.).
Chief Cities (1965 est.): Salem, the capital (63,500); Portland (380,000); Eugene (70,000); Corvallis (28,500); Medford (27,400); Springfield (23,500); Parkrose (23,000); Klamath Falls (16,500).
Government: *Chief Officers*—governor, Mark O. Hatfield (Republican); secy. of state, Tom McCall (R); atty. gen., Robert Y. Thornton (Democrat); treas., Robert W. Straub; supt. of pub. instr., Leon P. Minear; chief justice, William M. McAllister. *Legislature*—Legislative Assembly (convened Jan. 10, 1966); Senate, 30 members (19 Democrats, 11 Republicans); House of Representatives, 60 members (32 R, 28 D).
Education: *School enrollment* (1964–65)—public elementary, 290,000 pupils (11,381 teachers); public secondary, 174,000 pupils (7,593 teachers); nonpublic schools, 40,200 pupils (1,380 teachers); college and university (fall 1964), 61,705 students. *Public school expenditures* (1964–65)—$234,000,000 ($569 per pupil); average teacher's salary, $6,470.
Public Finance (fiscal year 1965): *Revenues, $929,557,972* (individual income taxes, $164,000,000; motor fuel tax, $59,660,244; federal funds, $137,482,382). *Expenditures,* $895,540,546 (education, $168,121,000 in 1964; health, welfare, and safety, $57,213,000 in 1964; highways, $169,416,199 in 1965). *State debt,* $452,130,000 (July 1, 1965).
Personal Income (1964): $4,876,000,000; average annual income per person, $2,606.
Public Assistance (fiscal year 1965): $42,587,376 to 3,358 recipients (aged, $8,788,229; dependent children, $14,372,997).
Labor Force (employed persons, July 1964): *Agricultural,* 95,400; *nonagricultural* (wage and salary earners), 672,100 (24% manufacturing, 18% trade, 16% government). *Unemployed persons* (July 1964)—30,500.
Manufacturing (1963): Value added by manufacture, $1,569,824,000 (lumber and wood products, $691,233,000; transportation equipment, $49,676,000; primary metals, $66,262,000; nonelectrical machinery, $64,981,000; electrical machinery, $57,159,000; fabricated metals, $60,691,000; food and products, $236,197,000).
Agriculture (1964): *Cash farm income,* $443,371,000 (livestock, $178,086,000; crops, $245,862,000; govt. payments, $19,423,000). *Chief crops* (tons)—wheat, 831,000 (ranks 15th among the states); sugar beets, 453,000 (rank, 12th); potatoes, 424,000 (rank, 10th); barley, 391,000 (rank, 7th); oats, 125,000 (rank, 18th); pears, 122,500 (rank, 2nd); apples, 43,200 (rank, 15th); hay, 2,134,000; corn for grain, 28,600; cherries, 28,000.
Mining (1964): *Production value,* $64,269,000 (ranks 39th among the states). *Chief minerals* (tons)—pumice, 566,000 (rank, 2nd); lime, 95,000 (rank, 17th); nickel, 15,420 (rank, 1st); copper, 15 (rank, 14th); silver, 14,000 troy ounces (rank, 13th); gold, 661 troy ounces (rank, 12th).
Fisheries (1964): *Commercial catch,* 58,110,000 pounds ($8,062,000). *Leading species* (1963)—flounder, sole, 15,932,000 pounds ($922,000); albacore tuna, 11,400,000 pounds ($1,757,000); salmon, 8,262,000 pounds ($2,606,000); ocean perch, 8,011,000 pounds ($363,000).
Transportation: *Roads* (1965), 80,794 miles (51,072 surfaced); *motor vehicles* (1964), 1,159,883; *railroads* (1964), 5,081 miles; *airports* (1964), 187.
Communications: *Telephones* (1965), 862,800; *television stations* (1964), 14; *radio stations* (1964), 97; *newspapers* (1965), 21 (daily circulation, 602,439).

Oregon's congressional districts in accordance with the "one-man, one-vote" ruling by the U.S. Supreme Court. The eastern sections of Districts 1 and 3 were attached to the large eastern District 2 in order to equalize the populations among these districts.

Conferences. Two conferences were held in Portland. The Western Governors Conference, with Governor Hatfield as chairman, met in June to discuss such mutual state problems as revenue sources and legislative reform. The National Legislative Conference met in August, with 1,000 delegates from state legislatures. In August, an International Lunar Geological Field Conference was held in Bend.

Politics. As the year ended, there was much speculation over who would run for the two major political offices to be vacated in 1966. Democratic Sen. Maurine Neuberger announced that she would not seek another term in the U.S. Senate. Governor Hatfield, who is required by law to step down after his second term, announced in early 1966 that he would run for the Senate seat.

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ORGANIZATION OF AMERICAN STATES. See LATIN AMERICA.

ORGANIZATIONS, American. See SOCIETIES AND ORGANIZATIONS.

ORIENTAL RELIGIONS. See RELIGION.

ORTHODOX CHURCHES. See RELIGION.

OTTAWA

Ottawa is Canada's national capital and fifth largest city (1965 est. pop.: city, 290,446; metropolitan area, 450,000). During 1965, preparations were under way for the city's participation in the Canadian Centennial events scheduled for 1967.

Centennial Projects. Work continued on the Centre for the Performing Arts, which will be the principal national monument of the 1967 Canadian Centennial. The center, occupying an entire city block on Confederation Square in the heart of Ottawa, will include a concert hall seating 2,300, a theater seating 900, and a small studio for experimental theater. The cost of the complex will be over $18,000,000.

A multipurpose arena that will seat 10,000, combined with a covered grandstand that will hold 15,000 more, was designated as the city's official project for the 1967 Canadian Centennial. The structure, which will cost an estimated $5,200,000, will be used for activities connected with Ottawa's annual Central Canada Exhibition. The arena will also serve as the official home of the Ottawa Rough Riders football club and will be used as well for hockey games.

Inter-Parliamentary Conference. Ottawa was host to delegates from Western, Communist, and nonaligned nations at the 54th Inter-Parliamentary Conference, Sept. 8–17, 1965. The city entertained the world legislators with special performances of the Toronto Symphony Orchestra and the Royal Winnipeg Ballet.

Government. A report commissioned by the city proposed that all municipal administrations in the national capital area be abolished and replaced by a powerful regional government. In addition to Ottawa proper, the capital area includes Hull, in Quebec Province, and several nearby municipalities in Ontario. The sweeping proposal provoked strong controversy among municipal leaders throughout the Ottawa region.

The present city government consists of a Board of Control and a Council. Administrative functions are vested in the Board of Control, which is responsible to the Council. The board is composed of a mayor (Donald B. Reid, elected in December 1964 for a two-year term) and four elected controllers. The Council is composed of two aldermen from each of the city's 10 wards.

Economy. The city budget for 1965 called for expenditures of $81,671,819, an increase of 10% over 1964. Of this total, $34,422,700 was spent for education and $47,249,119 for general purposes. These sums were raised from federal and provincial grants ($24,106,324), from the provision of services ($22,460,343), and from taxes on real estate ($35,105,152). The total assessed property valuation in 1965 was $610,230,000 ($214,762,000 in business and commercial assessments; $395,468,000 in residential assessment).

Education. For 1965, Ottawa's school enrollment figures were: public primary schools, 25,984; Roman Catholic primary schools, 28,331 (14,014 in the English-speaking section; 14,317 in the French); and collegiate high schools, 20,950. The University of Ottawa had 4,500 students, and Carleton University, 3,100.

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OUTER MONGOLIA. See MONGOLIA.

UPI

OTTAWA will be a primary site for Canadian Centennial activities in 1967. Here, in Confederation Square, ground has been cleared to make way for constructing the Canadian Centre for the Performing Arts as a part of the celebration. A Human and Natural History Museum will be built nearby.

PACIFIC ISLANDS

Delegates from 17 island territories in the Pacific Ocean met at Lae, New Guinea, in July 1965 to discuss mutual social and economic problems. The 50 delegates represented islands governed by members of the South Pacific Commission, which includes Australia, France, the United States, New Zealand, Britain, and Western Samoa.

Pacific Islands Conference. K.T. Mara, delegate from the Fiji Islands, and Carlos Taitano, delegate from Guam, led a contingent of conference delegates which demanded that the island territories be given a direct voice in the decisions of the South Pacific Commission. They proposed that the island territories share the expenses of the commission's programs, and that they be raised from an advisory to a partnership level in the commission.

Discussion of local island problems indicated that the rapid growth of major cities was producing slums, poverty, crime, and delinquency in urban areas throughout the territories. Dr. J.V. de Bruijn, officer in charge of urbanization problems for the South Pacific Commission, attributed the burgeoning growth of cities to "alarming" population growth which is driving rural dwellers to the cities to find work. Among the fastest growing cities are Suva, Fiji; Noumea, New Caledonia; and Apia, Western Samoa. Few of the islands are large enough or have enough natural resources to diversify and expand their economy, and many governments are finding it increasingly difficult to provide housing, education, and health services for the growing population.

PACIFIC ISLANDS OF THE UNITED STATES

Island or Group	Area (sq. mi.)	Population (1960 census)	Capital (with 1960 population)
American Samoa	76	23,000[1]	Pago Pago (1,251)
Baker[2]	1	. . .	. . .
Bonin	40	205[3]	. . .
Canton and Enderbury[2]	27	320	. . .
Guam	212	72,000[1]	Agana (1,443)
Howland[2]	1	. . .	. . .
Jarvis[2]	1	. . .	. . .
Johnston[4]	. .[5]	156	. . .
Kingman Reef[4]	. .[5]	. . .	. . .
Midway[4]	2	2,356	. . .
Palmyra[6]	4	. . .	. . .
Ryukyu	850	927,000[1]	Naha (250,832)
Trust Territory	712	77,913	Saipan (7,464)
Caroline	463	53,214	. . .
Mariana	183	9,300	. . .
Marshall	66	15,399	. . .
Volcano	11	1,154	. . .
Wake[2]	3	1,097	. . .

[1] Mid-1964 est. [2] Under administration of the Office of Territories, Department of the Interior. [3] 1964 census. [4] Under U.S. Navy control. [5] Less than 0.5 sq. mi. [6] Administered by the Federal Aviation Agency.

Ryukyu Islands. A steady build-up of the American military base on Okinawa accompanied the escalation of the war in Vietnam during 1965. The United States, which took over the administration of the islands from Japan in 1945, reaffirmed its intention of maintaining trusteeship of the islands, but made concessions to islanders' demands for more autonomy for their government and eventual return to Japanese control. Japan's "residual sovereignty" over the islands was acknowledged in a joint declaration issued early in January by President Johnson and Premier Eisaku Sato of Japan. However, the declaration also reaffirmed the need for continuing U.S. control of the islands while they remain strategic to U.S. military security in Southeast Asia.

Premier Sato paid a three-day visit to the Ryukyu Islands in August. His arrival on August 21 was greeted by about 7,000 leftist demonstrators demanding the immediate return of the islands to Japanese control. Sato announced that Japan would increase its aid to the islands to implement a long-range economic development program. He promised to increase aid to $15 million for the fiscal year 1966, and eventually to $56 million.

On December 20, President Lyndon Johnson authorized the Ryukyuan Legislature to choose the islands' chief executive, who formerly was appointed by the U.S. high commissioner for the Ryukyu Islands. The legislature was expected to elect Seiho Matsuoka, leader of the Democratic party, who has been serving as appointed chief executive of the islands.

In legislative elections held on November 14, the pro-American Democratic party retained its majority, winning 19 seats in the 32-seat Ryukyuan Legislature. The major opposition party in the islands, the Socialist Masses party, took seven seats in the legislature, the Socialists two, and the Communists one. The remaining three seats went to independent candidates.

A special U.S. counterinsurgency force, the Special Action Force, Asia, practiced civic action techniques in isolated parts of the Ryukyu Islands during 1965. They provided medical service and taught sanitation methods that will ultimately be used in Vietnam to supplement counterinsurgent warfare there.

On October 27, President Johnson signed a resolution authorizing the expenditure of $22 million to pay for Okinawan claims that arose during the U.S. military occupation from 1945 to 1952. Although the peace treaty with Japan in 1952 waived all Okinawan death and injury claims during the seven-year period, the U.S. high commissioner, Lt. Gen. Albert Watson, recommended payment as an act of good faith by the United States.

The gross national product of the Ryukyu Islands in 1964 totaled $328 million. About 45% of the amount derived from United States payments for use of privately and municipally owned land. Of the total labor force of 412,000, more than 60,000 were employed by the U.S. military installations on the islands.

United Nations Trust Territory. The Trust Territory of the Pacific Islands, administered by the United States and comprising the Mariana Islands (except Guam), the Caroline Islands, and the Marshall Islands, elected its first Congress on January 19. The 12-member House of Delegates is composed of two representatives from each of six districts, and the 21-member General Assembly is apportioned on a population basis: Of a total population of 88,000 in the territory, about 35,800 were registered to vote. The Congress met for the first time on July 12 in Saipan. U.S. Secretary of the Interior Stewart L. Udall described the election as a major step in developing self-government in the islands.

The United Tanker Corporation was awarded a two-year contract to operate the three-ship fleet of the Trust Territory of the Pacific. The contract was awarded in August on the recommendation of the U.S. Department of the Interior, which administers the territory. The contract provides that 25% of the gross receipts for the operation of the vessels be paid annually to the territory.

American Samoa. American Samoa suffered extensive damage from tropical hurricanes that battered the islands on Jan. 29 and 30, 1966. At least two persons were killed, and the entire crop of breadfruit was reportedly destroyed.

PAINTING AND SCULPTURE. See ART.

PAKISTANI WOMEN in Dacca participate in a mass military training program spurred by the war with neighboring India during the summer of 1965.

UPI

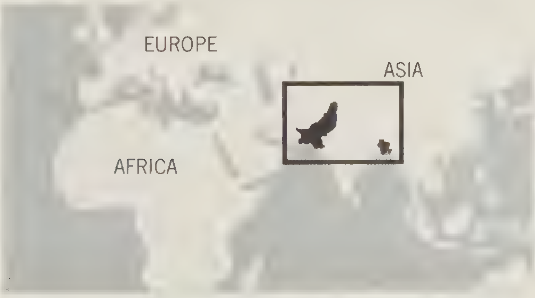
PAKISTAN

Although 1965 opened on a note of stability with President Ayub Khan's reelection, the year proved to be a troubled time for Pakistan. The president faced opposition at home and a dangerous situation along the borders with India.

The 18-year old Indian-Pakistani dispute over Kashmir erupted in open warfare in August and September, and, although a cease-fire soon took effect, Pakistan's economy was set back and many of its allies were alienated. The year ended on a note of hope with Ayub and India's Prime Minister Shastri planning to meet to resolve their differences. This meeting produced an encouraging accord on Jan. 10, 1966, but left the Kashmir issue untouched.

Domestic Politics. On Jan. 2, 1965, President Mohammed Ayub Khan was elected to a new five-year term, defeating Miss Fatima Jinnah by a two-thirds vote of the 80,000-member electoral college, which itself had been elected the previous November. On March 21 the electors presented Ayub with a National Assembly dominated by his own Muslim League, which captured about 80% of the seats. In

PAKISTAN · Information Highlights



Area: 365,529 square miles.
Population: 100,762,000 (July 1, 1964 est.).
Chief Cities (1961 census): Rawalpindi, the temporary capital, 340,175; Karachi, 1,912,598; Lahore, 1,296,477; Dacca, 556,712.
Government: *President*—Mohammed Ayub Khan (since Oct. 27, 1958). *Parliament*—National Assembly, 156 members.
Religious Faiths: Muslims, 88% of population; Hindus, 11%; Christians, 1%.
Education: *Literacy rate* (1961)—19% of population aged 15 and over. *Total school enrollment* (1961–62)—6,932,325 (primary, 5,334,637; secondary, 1,559,247; teacher-training, 12,041; vocational, 13,715; university, 12,685).
Finance (1965 est.): *Revenues*, $585,700,000; *expenditures*, $1,167,600,000; *monetary unit*, rupee (4.7619 rupees equal U.S.$1).
Gross Domestic Product (1964): $8,550,000,000.
National Income (1964): $7,962,000,000; average annual income per person, $79.
Economic Indexes: (1964): *Industrial production*, 182 (1958=100); *agricultural production*, 120 (1956–57=100); *cost of living*, 110 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,553,000; gasoline (1963), 356,000; meat (1963), 351,000; sugar, 293,000; cotton yarn, 230,400; newsprint paper, 35,160; beer (1963), 1,820.
Crops (metric tons, 1964–65 crop year): Rice, 16,800,000 (ranks 4th among world producers); wheat, 4,184,000 (rank, 11th); cottonseed, 761,000 (rank, 7th); tobacco, 100,100, (rank, 10th); tea, 28,700 (rank, 6th); wool (1963), 19,500 (rank, 16th); jute, 967,000; maize, 531,000.
Minerals (metric tons, 1964): Bituminous coal and lignite, 1,214,000; salt, 522,000; gypsum, 195,000; barite, 12,088; iron ore, 5,100; crude petroleum, 3,732,000 barrels; natural gas, 59,100,000,000 cubic feet.
Foreign Trade (1964): *Exports*, $427,000,000 (chief exports, 1963: jute, 154,200,000; raw cotton, $68,900,000); *imports*, $998,000,000 (chief imports, 1963: nonelectrical machinery, $151,600,000; unmilled wheat and maslin, $106,600,000; iron and steel, $104,400,000). *Chief trading partners* (1963): U.S. (took 9% of exports, supplied 44% of imports); Britain (took 13% of exports, supplied 14% of imports); Japan (took 10% of exports, supplied 5% of imports).
Transportation: *Roads* (1964), 24,422 miles (10,570 paved); *motor vehicles* (1964), 141,169 (automobiles, 92,534); *railways* (1963), 7,039 miles; *merchant vessels* (1964), 50 (341,000 gross registered tons); *national airlines*, Pakistan International Airlines, Pakistan Aviation, Ltd.; *principal airports*, Dacca, Karachi.
Communications: *Telephones* (1964): 107,334; *television stations* (1964), 2; *radios* (1962), 396,000; *newspapers* (1962), 100 (daily circulation, 511,000).

PICTORIAL PARADE

PAKISTAN PRESIDENT AYUB KHAN (l.) confers with U.S. President Johnson in Washington, D.C. on December 14. The two leaders reaffirmed Pakistani-American friendship.

MOHAMMED AYUB KHAN was reelected president of Pakistan by a large majority early in 1965. To charges that he was a dictator, Ayub countered, "dictatorships do not have elections." Pakistan's apparent drift toward Communist China was rationalized by the president as a "geographic necessity," and Ayub assured skeptical Americans that Pakistan looked to the United States because it had "no expansionist ambitions." Although the year brought war with India, Ayub gave credence to his expressed peaceful intentions by accepting a truce and signing an accord with India.

Ayub Khan was born about 1908 in Abbottabad, British India. A Muslim from a military family, he studied at the Royal Military College at Sandhurst, England, and became an officer in the British Indian Army in 1928. Following the 1947 partition of India and Pakistan, Ayub rose in the Pakistani army, becoming commander-in-chief in 1951. After a series of government crises he seized power on Oct. 27, 1958. Two years later he was confirmed as president.

PAKISTANIS DETAINED BY INDIA during the India-Pakistan war of August-September 1965 march homeward in late December as part of an exchange of some 7,000 internees.

UPI

May the Muslim League gained an overwhelming majority in the West Pakistan Provincial Assembly and a strong plurality in the East Pakistan Assembly.

Nevertheless, there was evidence that Ayub no longer completely controlled his government. In his inaugural address on March 23, the president expressed concern over "internal disunity." Foreign Minister Zulfikar Ali Bhutto headed a group within the government that pressed for closer ties with Communist China and continued war with India.

War with India. India and Pakistan have quarreled since 1947, and 1965 witnessed the outbreak of war between them. The year began with the usual recriminations on both sides. Starting in April, hostilities occurred in a dispute over the Rann of Kutch, an area of salt flats on the Arabian Sea. Both countries employed arms, and there were several hundred casualties. On June 30 the antagonists signed a cease-fire agreement negotiated by Britain. Similar incidents occurred along the East Pakistan-India border throughout the spring.

It was Kashmir, however, that provided the impetus to open warfare. Early in the year India took steps to integrate Indian-held Kashmir with India proper; to Pakistan this was an invitation to battle. In early August about 3,000 armed Pakistanis infiltrated Indian Kashmir. The Indian army retaliated by crossing the 1949 UN cease-fire line and moving into Pakistan. In September the Pakistan and Indian armies, using tanks and jet planes, engaged in combat in Kashmir and at other points along their lengthy border, notably in the region of Lahore, Pakistan. Although both sides claimed great victories, neither country launched a major thrust. India and Pakistan both were too weak to conduct massive battles, especially since the United States suspended military aid to the warring nations.

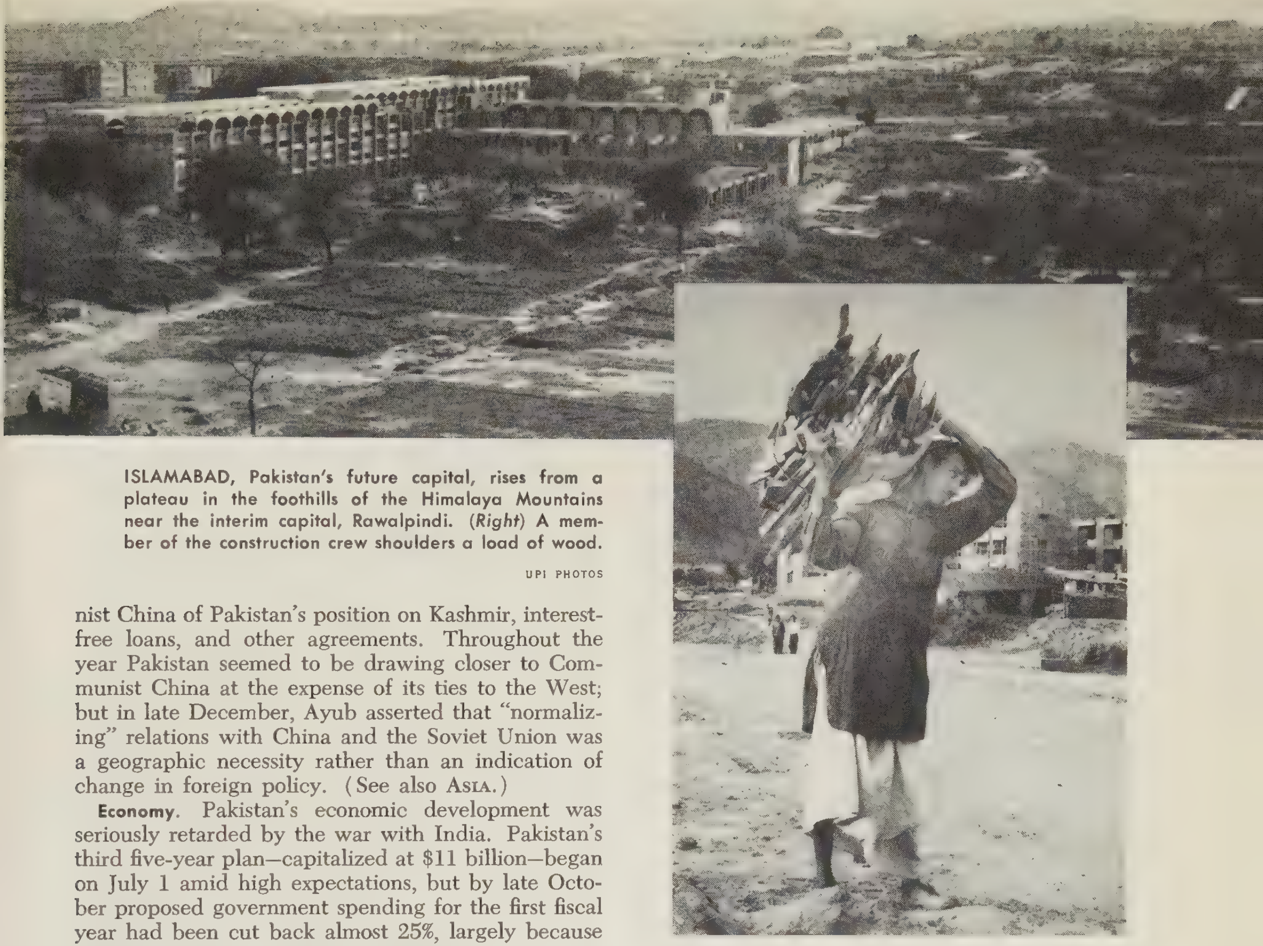
Peace in this part of the world, however, was of vital interest to both the West and the Soviet bloc, and most major nations backed the efforts of UN Secretary-General U Thant to arrange a cease-fire. A Kashmir settlement became especially urgent in mid-September, when Communist China, which had clashed with India in 1962, threatened to join the war.

On September 22, India and Pakistan agreed to a truce called by the UN Security Council. Numerous serious truce violations occurred through the end of 1965, but Ayub and Shastri accepted an offer by Soviet Premier Kosygin to mediate the Kashmir dispute in Tashkent, Soviet Asia. The Declaration of Tashkent, signed on Jan. 10, 1966 (a few hours before Shastri's death), provided for a troop withdrawal to positions held prior to Aug. 5, 1965.

Foreign Relations. Pakistan's foreign relations were colored by the war with India. Relations with the United States declined to an all-time low in September with the cessation of American military and economic aid. This provoked anti-American riots and demonstrations in Karachi and Lahore. It was not until Jan. 19, 1966—after President Ayub's cordial visit to Washington (Dec. 14–15, 1965) and after the Tashkent accord—that the United States authorized a new commitment of $8.2 million for Pakistan's economic development.

On October 5, Pakistan broke diplomatic ties with Malaysia, a fellow member of the Commonwealth of Nations, because of Malaysia's alleged partiality toward India. On the other hand, Pakistan became friendlier with Indonesia, Malaysia's sworn enemy.

Relations with the Soviet Union improved after a visit by Ayub to Moscow in April. A visit to Peking in March resulted in strong support by Commu-



ISLAMABAD, Pakistan's future capital, rises from a plateau in the foothills of the Himalaya Mountains near the interim capital, Rawalpindi. (*Right*) A member of the construction crew shoulders a load of wood.

UPI PHOTOS

nist China of Pakistan's position on Kashmir, interest-free loans, and other agreements. Throughout the year Pakistan seemed to be drawing closer to Communist China at the expense of its ties to the West; but in late December, Ayub asserted that "normalizing" relations with China and the Soviet Union was a geographic necessity rather than an indication of change in foreign policy. (See also ASIA.)

Economy. Pakistan's economic development was seriously retarded by the war with India. Pakistan's third five-year plan—capitalized at $11 billion—began on July 1 amid high expectations, but by late October proposed government spending for the first fiscal year had been cut back almost 25%, largely because of the uncertainty of foreign aid.

Disasters. Violent cyclones and tidal waves struck the same region around the Bay of Bengal in East Pakistan on May 12, June 1, and December 15, causing more than 45,000 deaths. On May 20 a Pakistan jetliner crashed in Cairo on its inaugural flight from Karachi to London, killing 119 persons.

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PANAMA

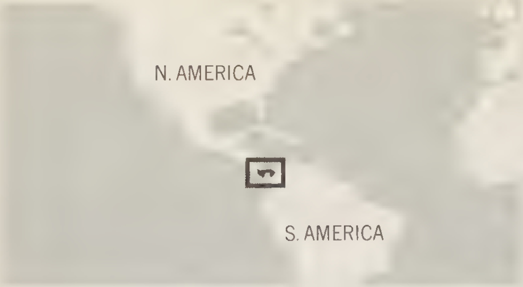
Developments in Panama in 1965 were dominated by negotiations for a new Panama Canal treaty with the United States. As a result of the new hopeful atmosphere generated by these negotiations, and the firm police measures taken by the government, there was no repetition of the violent anti-United States demonstrations that took place in 1964. The economy recovered substantially in 1965 from the damage suffered the previous year.

Canal Treaty. Negotiations for a new canal treaty began in Washington in January and created an atmosphere of expectation in Panama. By mid-1965, however, the lack of further action on the canal treaty and U.S. indecision concerning the location of the proposed new sea-level canal gave rise to rumors and apprehension in Panama. This concern was reduced by a joint announcement issued on September 24 by Presidents Lyndon Johnson and Marco Robles that an agreement in principle had been reached in the treaty negotiations. It was also announced that the new treaty would recognize Panama's sovereignty in the Canal Zone; integrate the canal area with the rest of Panama; make Panama a partner in the administration, operation, and profits of the canal; and provide for the termination of the new treaty either after a specific number of years or on the date of the opening of a new sea-level canal—whichever occurred first.

The opposition Panameñista party immediately denounced the announcement as ambiguous, but President Robles said in November that he expected the new treaty to be accepted in Panama if the terms were right. There was impatience, however, at the lack of information given to the public on the details of the negotiations. The economic benefits expected from a new treaty were impatiently awaited as one answer to Panama's social and economic development problems.

There were no anti-U.S. demonstrations of the kind that in January 1964 had caused widespread destruction of property, damaged Panama's economy, and hurt U.S.-Panamanian relations. A chief reason for the relative tranquility was President Robles' determination to use the National Guard, the only armed force in the country, to keep order. The anniversary of the 1964 rioting passed without an important incident. (See also LATIN AMERICA.)

Government Reorganization. President Robles improved his political position in July by reorganizing the cabinet to give more strength to the Liberal and Republican parties, which were not part of the coalition that elected him in 1964. The reorganization



PANAMA · Information Highlights

Area: 29,208 square miles.
Population: 1,244,000 (July 1, 1965, est.).
Capital: Panamá (1964 est. pop., 318,536).
Government: *President*—Marco A. Robles (took office Oct. 1, 1964); first vice president, Max Delavalle; second vice president, Raúl Arango. *Parliament*—National Assembly, 42 members; party seating (1965): National Liberals, 8; Republicans, 4; other pro-administration parties, 16; Panameñista, 12; other opposition parties, 2.
Religious Faiths: Roman Catholics, 72% of population; others, 28%.
Education: *Literacy rate* (1960)—73% of population aged 15 and over. *Total school enrollment* (1963–64)—240,990 (primary and secondary, 236,104; university, 4,886).
Finance (1964): *Revenues,* $81,600,000; *expenditures,* $126,900,000; *public debt* (1963), $110,100,000; *monetary unit,* balboa (1 balboa equals U.S.$1).
Gross National Product (1962): $491,400,000.
National Income (1962): $427,300,000; average annual income per person, $373.
Economic Indexes (1964): *Agricultural production,* 135 (1956–57=100); *cost of living,* 105 (1958=100).
Manufacturing (metric tons): Gasoline (1963), 264,000; cement (1964), 125,000; sugar (1964), 57,000; meat (1962), 30,000; lumber (1963), 29,000 cubic meters.
Crops (metric tons): Bananas (1963–64), 493,000; coffee (1964–65), 5,100; dry beans (1963–64), 5,000.
Chief Mineral: Salt, 11,000 metric tons (1964).
Foreign Trade (1964): *Exports,* $68,020,000 (chief exports: bananas, $30,270,000; refined petroleum, $24,940,000; shrimp, $7,040,000; cacao, $450,000); *imports,* $198,000,000 (chief import: crude petroleum, $33,720,000). *Chief trading partners* (1963): U.S. (took 62% of exports, supplied 46% of imports); Venezuela (supplied 19% of imports); Canal Zone (took 14% of exports, supplied 2% of imports).
Transportation (1964): *Roads,* 3,845 miles (660 paved); *motor vehicles,* 33,781 (automobiles, 24,992); *merchant vessels* 553 (4,337,000 gross registered tons); *national airline,* Compañía Panameña de Avación; *principal airport* Panamá.
Communications (1964): *Telephones,* 39,086; *television stations,* 3; *television sets,* 48,000; *radios* (1962), 225,000; *newspapers* (1963), 9.

made it easier for Robles to resist moves by the large opposition Panameñista party.

Fiscal Affairs. Early in 1965 the president sought to increase government revenues by raising customs duties, but widespread fear that this action would increase prices led him to abandon the project. There was some criticism of the new, higher, and more efficiently enforced income tax that went into effect on Jan. 1, 1965. As economic activity remained fairly strong, however, fear of the new tax declined.

For the first half of 1965, ordinary government receipts were up 11% over the same period of 1964. The increased revenues lowered the expected deficit from the record $86.6 million 1965 budget.

Economy. In the early months of 1965, gains were registered for banana and shrimp exports, and for potato, rice, and electric power production. Colón Free Zone operations also reported gains.

Unemployment in the cities and underemployment in the countryside remained a problem. A government report showed that although 50% of the labor force was employed in agriculture, it created only 25% of the gross national product. Slow industrial investment was a soft spot in the economy.

President Robles expressed the belief that industrial investment would remain slow unless Panama joined the Central American Common Market. A Foreign Trade Advisory Department was created to deal with this question.

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PANAMA CANAL AND CANAL ZONE

The Panama Canal, which crosses the Isthmus of Panama, connects the Atlantic and Pacific oceans. Its length is 51.6 miles from deep water to deep water, and 40.3 miles from shore to shore. It is located in a 10-mile-wide strip of land, the Canal Zone, which was leased in perpetuity to the United States by the Republic of Panama in 1903. Including tidal water, the Canal Zone covers 647.29 square miles. The United States was given the right to act as sovereign in the area "to the entire exclusion of the exercise by the Republic of Panama of any such sovereign rights." It guaranteed the independence of Panama, paid $10 million, and agreed to pay an annuity of $250,000, later increased to $1,930,000. After receiving the grant the United States paid private property owners in the zone $1,873,170 for their holdings.

Population. The 48,224 residents of the Canal Zone in 1965 consisted almost entirely of employees of the U.S. government and their families, and included 38,225 U.S. citizens.

Administration and Government. The Canal Zone government, with headquarters at Balboa Heights, was created by Congress. The governor of the Canal Zone, appointed by the president of the United

WIDE WORLD

PANAMA'S AMBASSADOR to the United States, Ricardo Arias (l.), shakes hands with President Lyndon Johnson in Washington, D.C., September 24, after negotiations that led to agreement in principle on new treaty for the Panama Canal.

States, is automatically president of the U.S. government-owned Panama Canal Company.

The Panama Canal Company operates the canal and repays net operating costs of the government (about $12,000,000 annually) to the U.S. Treasury. Interest of $10 million a year on unrecovered U.S. investment in the zone (almost $500 million) must also be paid. The small remaining balance finances capital improvement in the waterway.

The Panama Canal Company and the Canal Zone government in the fiscal year 1965 employed 14,265 full-time persons—Panamanians and Canal Zone residents, of whom 3,821 were U.S. citizens.

Besides the annuity of $1,930,000 paid to Panama by the United States, purchases by Canal Zone civilian and military agencies in 1964 added more than $90 million to Panama's economy.

Education. School attendance is not compulsory in the Canal Zone. The U.S. school system is modeled after school programs in the United States, with Spanish emphasized as a language course. The Latin American schools, for non-U.S. citizens, are comparable in curriculum to schools in Panama. The curriculum is in Spanish.

Canal Traffic. In the fiscal year ended June 30, 1965, records were set for traffic, cargo tonnage, and tolls collected. Over 12,000 oceangoing vessels passed through the canal and paid tolls of more than $67,000,000. The cargo tonnage was 78,496,609.

In 1965 a central traffic control system was completed in Balboa to provide more efficient control of ships. Conversion to new locomotives for towing ships through the locks was completed when the last of the faster, more powerful machines went into service in 1965. Experiments continued to improve methods for overhauling locks so as to shorten the time that lanes are out of use.

(See also LATIN AMERICA; PANAMA.)

FRANK A. BALDWIN
Panama Canal Information Office

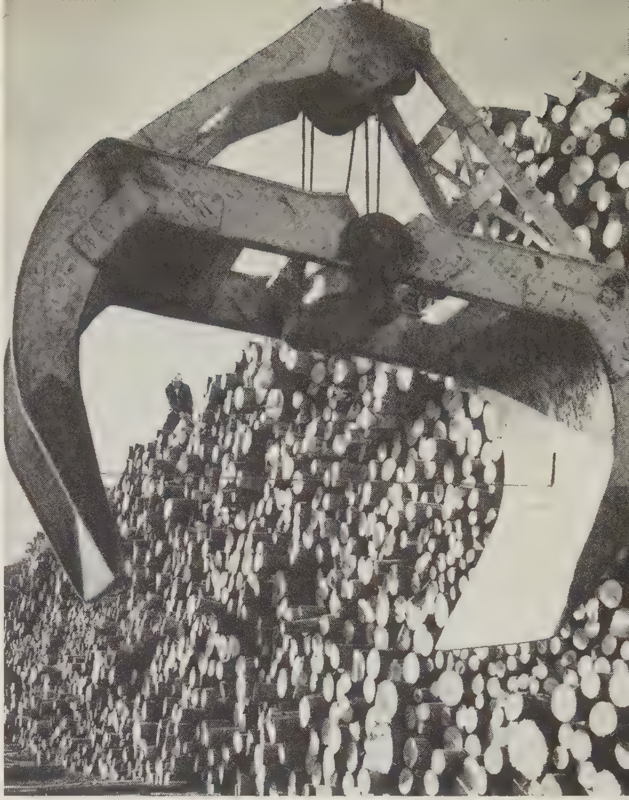
PAPER INDUSTRY

The consumption of paper and paperboard in the United States in 1965 reached 48 million tons—a new high for the seventh consecutive year. This was equivalent to 490 pounds per person, a gain of 5% from 1964.

Product Gains. The major gains in consumption were made by coated printing papers, which are used largely for magazines, and by uncoated printing grades, which are used for books and business papers. Fine paper grades, particularly thin papers for one-time carbons in electronic computers, also gained strongly. In addition, refuse sacks made from kraft papers were strongly promoted by the industry and gave promise of future growth.

Growth in special food board and other boxboard reflected the rising trend of packaged products sold through supermarkets. Growth in containerboard production can be traced in part to a rising trend in exports. The fibre-foil can, used mainly for fruit juices and motor oil, but rapidly finding many new uses in other fields, continued to show a strong growth trend.

Plant Capacity and Capital Expenditures. The paper and paperboard industry scheduled about 4.8 million tons of new capacity for 1966 and 1967, which would bring total capacity to over 53 million annual tons. Total expenditures on plant and equipment amounted to a record $1.1 billion in 1965.



PICTORIAL PARADE

PAPER INDUSTRY in the United States used more than 50 million cords of wood in 1965. Here, a workman in Kimberly, Wis., prepares wood for a Kimberly-Clark mill.

U.S. PAPER AND PAPERBOARD PRODUCTION
(In thousands of tons)

	1962	1963	1964	1965[1]
Newsprint	2,105	2,213	2,296	2,100
Total printing	4,939	5,243	5,564	5,980
Groundwood	910	956	952	1,040
Coated papers	2,269	2,401	2,620	2,820
Uncoated book	1,760	1,886	1,990	2,120
Fine	2,054	2,104	2,210	2,380
Coarse	4,124	4,251	4,396	4,530
Special industrial	902	912	971	1,140
Sanitary tissue	2,179	2,340	2,518	2,625
Tissue, excluding sanitary	235	236	227	225
Total paper	16,537	17,300	18,180	18,980
Containerboard	9,925	10,425	11,420	11,900
Special food board	1,727	1,737	1,848	2,040
Folding boxboard	3,050	3,165	3,325	3,300
Set-up boxboard	661	637	649	620
Cardboard	102	109	128	100
Other paperboard	2,021	2,167	2,251	2,420
Total paperboard	17,486	18,239	19,623	20,380
Wet machine board	146	141	148	140
Construction paper	1,429	1,453	1,534	1,580
Construction board	1,954	2,098	2,263	2,220
Total paper and board	37,552	39,231	41,748	43,300

[1] Preliminary. Details may not add to totals because of rounding of figures to the nearest thousand.

Output and Raw Materials. Record-high consumption levels, combined with rising exports, more than offset a relatively strong increase in newsprint imports. The domestic output of paper and paperboard in 1965 was estimated at 43.3 million tons, or 2 million tons above 1964.

Consumption of wood pulp at paper and paperboard mills exceeded 34 million tons, and that of waste paper was close to 10 million tons. Wood pulp production totaled about 33 million tons—an increase of 1 million tons from 1964 in spite of a decline in exports. Consumption of pulpwood in 1965 exceeded 50 million cords.

BENJAMIN SLATIN
Economist, American Pulp and Paper Association

PARAGUAY

As expected, the Colorado party, which dominates the central government, retained most seats in the municipal council elections of October 1965. These were the first municipal elections since President Alfredo Stroessner came to power in 1954 in which opposition parties were allowed to present lists of candidates opposing those of the Colorado party. The Colorado party made a strong showing, probably as a result, in part, of Paraguay's continuing economic prosperity stemming from a favorable trade balance, increased production, and much foreign aid.

Political Affairs. The participation of the Liberal Febrerista parties in the municipal elections reflected a more relaxed political atmosphere in Paraguay. It also indicated a feeling of greater security on the part of the central government, which is dominated by the Colorado party and the armed forces. The constitution guarantees one third of the 60 seats in the unicameral Congress to the party that polls the second largest number of votes. Because a small splinter of the Liberal party participated in the presidential and congressional elections of 1963, 20 of its members now have an ineffectual voice in Congress.

PARAGUAY · Information Highlights

Area: 157,047 square miles.
Population: 1,996,000 (June 30, 1965 est.).
Chief Cities (1962 preliminary census): Asunción, the capital (includes Lambaré), 305,160; Encarnación, 18,504; Concepción, 18,031; Luque, 10,834.
Government: *President*—Alfredo Stroessner, took office Aug. 15, 1954. *Congress*—60 members; party seating (1965): Colorado party, 40; Liberal party, 20.
Religious Faiths: Roman Catholics, 92% of population; others, 8%.
Education: *Literacy rate* (1962)—68% of population aged 7 and over. *Total school enrollment* (1961)—339,200 (primary, 308,219; secondary, 15,316; teacher-training, 7,816; technical, 4,253; higher, 3,616).
Finance (1964): *Revenues*, $33,200,000; *expenditures*, $36,400,000; *monetary unit*, guarani (126 guaranis equal U.S.$1).
Gross National Product (1963): $383,000,000.
National Income (1963): $334,000,000; average annual income per person, $175.
Economic Index: *Cost of living* (1964), 148 (1958=100).
Manufacturing (metric tons): Sugar (1964), 52,000; cement (1964), 23,000; cotton yarn (1963), 12,900; beer (1963), 70,000 hectoliters.
Crops (metric tons, 1963–64 crop year): Cassava, 1,282,000 (ranks 5th among world producers); citrus fruits (1964–65), 178,000 (world rank, 18th); maize, 150,000; sweet potatoes and yams, 86,000; cottonseed (1964–65), 22,000; dry beans, 24,000; peanuts, 10,000; tobacco, 9,300; bananas, 141,000; cotton lint (1964–65); castorbeans, 12,000; soybeans, 12,000; dry broad beans (1962–63), 3,000.
Minerals (metric tons, 1964): Lime, 18,000; limestone (1963), 52,600.
Foreign Trade (1964): *Exports*, $49,770,000 (chief exports: meat, $14,750,000; timber, $7,150,000; cotton, $4,200,000; quebracho extract, $3,970,000); *imports*, $33,770,000 (chief imports, 1963: wheat and preparations, $4,920,000; machinery, $4,060,000; metals and metal products, $3,280,000). *Chief trading partners* (1963): U.S. (took 23% of exports, supplied 29% of imports); Argentina (took 21% of exports, supplied 23% of imports); Great Britain (took 11% of exports, supplied 8% of imports); West Germany (took 4% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 7,786 miles (188 paved); *motor vehicles* (1964), 11,825 (automobiles, 7,727); *railways* (1963), 309 miles; *domestic airlines*, 2; *principal airport*, Asunción.
Communications: *Telephones* (1964): 12,939; *radios* (1962), 160,000; *newspapers* (1959), 5 (daily circulation, 64,000).

There were rumors in 1965 that President Stroessner wanted to continue in office after his term expires in 1968, and that he was seeking to have the constitution amended to permit him to run for a third term.

Paraguayan exiles continued to maintain that an oppressive political atmosphere prevailed in the country and that more than 3,000 persons were being held as political prisoners. The Human Rights Commission of the Organization of American States (OAS) investigated the charges. The commission's findings were submitted to the Second Extraordinary Inter-American Conference, which met in Rio de Janeiro in November.

Economic Developments. Landlocked Paraguay completed a vehicular route to Brazil in 1965, thus achieving easier access to its free port facilities at the Brazilian port of Paranagua. Paraguay is dependent on its river system, and low-water levels in 1964 had an adverse effect on the country's ability to compete in international trade.

The river problem was not serious enough, however, to reverse the trend toward a stable and more productive economy that began in 1961 with the stabilization of the monetary system. Other factors contributing to the general prosperity included increased demands for Paraguayan exports, a favorable balance of trade ($16 million in 1964), rising investor confidence in the economic and political system, increased agricultural and industrial production, and considerable foreign assistance. Paraguay received a $5.5 million loan from the International Monetary Fund and a $2.2 million loan for highway construction from the World Bank.

Despite the general prosperity, a budgetary deficit that began in 1962 persisted. Government revenues in 1965 were $3.5 million below anticipated expenditures.

Land Reform. Between 1960 and 1963 the government granted 20,500 property deeds, covering 1.2 million acres, to landless peasant families. Three thousand more families were scheduled to be settled on their own land during 1965 and 1966.

Alleged Communist Plot. The government announced in July that it had uncovered an armed Communist plot. Four guerrilla units were allegedly ready to unleash war in the rural areas, particularly in the sugarcane district west of Ascunción. Many of the 50 persons arrested in a three-day mop-up campaign were said to be infiltrators from Argentina, Brazil, and Chile. Stroessner's government accused Cuba and the USSR of backing the abortive antigovernment plot.

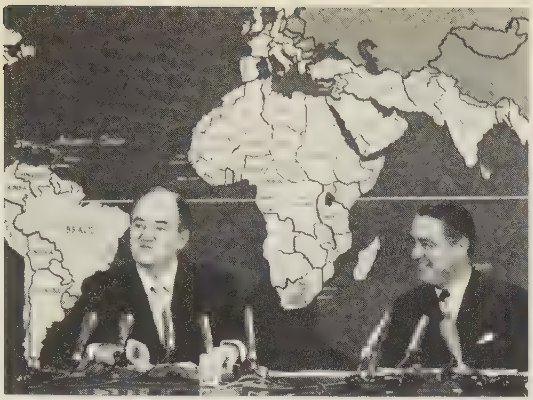
Foreign Relations. Paraguay gave asylum to Juan Lechín Oquendo, Bolivian labor leader and a founder of Bolivia's revolutionary party, the Movement of the National Revolution.

Early in May, Paraguay voted with most OAS countries to set up an Inter-American Peace Force to settle the crisis in the Dominican Republic.

Tornado. The city of Encarnación, about 140 miles south of Asunción, was hit by a severe tornado on October 24. More than 100 houses were destroyed. The government sent food, medical supplies, and other assistance to the city.

LEO B. LOTT
Associate Professor of Political Science
The Ohio State University

PARKS. See NATIONAL PARKS AND MONUMENTS.



WIDE WORLD

HUBERT HUMPHREY (left), who as U.S. vice president is chairman of Peace Corps Advisory Council, meets council on January 27 with corps director Sargent Shriver (right).

PEACE CORPS

The number of Peace Corps volunteers rose from about 8,600 in 1964 to about 11,800 in 1965. Volunteers were at work in 46 countries, the same as the 1964 total. In April the Peace Corps withdrew its personnel from Indonesia, but in September it sent a contingent to Barbados. In 1965 over 7,500 Peace Corps candidates were in training in the United States and Puerto Rico for overseas service.

By Dec. 31, 1965, of the 6,446 Peace Corps volunteers who had completed their service, 44 had reenrolled for another two-year tour of duty and 918 had extended their service by one year. There had been 653 married couples in the organization, including 253 couples who were married while in the corps. Thirty two children were born to Peace Corps couples abroad.

Recruitment Changes. There was a significant change of emphasis in Peace Corps recruiting in 1965. For the first time an attempt was made to enroll in the corps persons with a high degree of political as well as of intellectual motivation. Warren W. Wiggins, deputy director of the Peace Corps, stated on October 19 that "strongly motivated people, the individualists with intense social and political convictions, might give us some trouble as individuals. But on the whole, their contribution will be greater."

Wiggins pointed out that in seeking politically active young people, the corps was attempting to enroll dynamic individuals with a passion to make the world better, to take a stand, and to make sacrifices. He said that the agency was trying to make its personnel more representative "of the whole spectrum of American life and thought." He added that the agency obviously did not want "those who don't know where to draw the line, and who try to become political activists abroad."

The recruitment program, reorganized under Donovan McClure, an associate director of the corps, added 50 veterans of overseas Peace Corps duty to the recruiting force in 1965, and continued to send executives of the agency's headquarters staff on occasional recruiting missions.

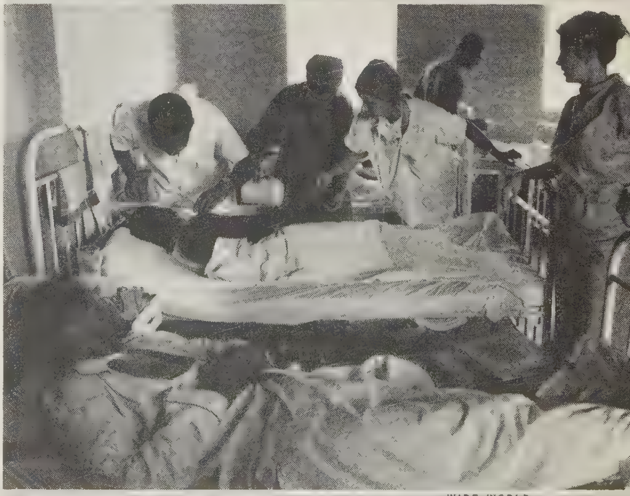
In 1965 the corps expanded a program to recruit college juniors, who would be given six weeks of training in the summer between their junior and senior years. In his senior year, the successful applicant would incorporate into his college pro-

BLACK STAR

PEACE CORPSMAN IN TANZANIA learns how to use primitive fire-making implement of Gogo tribe.

PIX

VOLUNTEER IN PAKISTAN (right) gives instruction in better farming methods to future teachers.



WIDE WORLD

NURSES IN DOMINICAN REPUBLIC work as Peace Corps members in rebel hospital during 1965 revolt.

gram specialized languages and other studies related to Peace Corps work.

Psychological Testing. On June 9, Sargent Shriver, the director of the Peace Corps, and Al Carp, the director of the corps' selection division, defended in a Senate hearing the use of psychological tests for Peace Corps volunteers. Both men urged that the use of such tests be continued, arguing that the House Foreign Affairs Committee in 1961 had specified that during Peace Corps training each applicant must receive psychological and psychiatric tests. Carp warned that "an emotionally immature and mentally unstable volunteer could do serious damage to the United States overseas."

College Accreditation. On June 12, Shriver announced in a commencement address at Western Michigan University, Kalamazoo, Mich., that Western Michigan would grant approximately one year of college credit for two years of Peace Corps service. The plan was conceived by the administration and approved by the faculty of the university. Shriver pointed out that "a volunteer overseas discovers that he learns as much as he teaches. If he makes this discovery sooner [rather] than later, he will be able to accomplish more." He also said that the volunteers would prove to be a great asset to the campus when they returned after their overseas service.

Appointments. On July 8, Shriver announced the appointment of Robert T. Freeman, a 47-year-old Negro, as associate director for management—one of the five top positions in the Peace Corps.

COUNTRIES SERVED BY THE PEACE CORPS

(Number of volunteers, by area and country, Dec. 31, 1965)

Country	Overseas	In training	Total
Africa			
Cameroon	101	22	123
Ethiopia	587	0	587
Gabon	52	0	52
Ghana	109	0	109
Guinea	66	22	88
Ivory Coast	60	14	74
Kenya	123	78	201
Liberia	347	92	439
Malawi	254	35	289
Morocco	103	26	129
Niger	81	0	81
Nigeria	621	79	700
Senegal	78	0	78
Sierra Leone	198	70	268
Somalia	86	0	86
Tanzania	335	67	402
Togo	75	0	75
Tunisia	218	0	218
Uganda	35	22	57
Total	3,529	527	4,056
Asia			
Afghanistan	186	0	186
India	590	163	753
Iran	255	22	277
Malaysia	569	82	651
Nepal	134	65	199
Pakistan	47	0	47
Philippines	569	75	644
Thailand	311	63	374
Turkey	527	73	600
Total	3,188	543	3,731
Latin America			
Barbados	29	0	29
Bolivia	306	0	306
Brazil	652	0	652
British Honduras	48	0	48
Chile	383	71	454
Colombia	512	70	582
Costa Rica	85	0	85
Dominican Republic	105	0	105
Ecuador	258	42	300
El Salvador	60	0	60
Guatemala	70	0	70
Honduras	118	0	118
Jamaica	85	0	85
Panama	140	102	242
Peru	417	0	417
St. Lucia	18	0	18
Uruguay	51	0	51
Venezuela	326	36	362
Total	3,663	321	3,984
Grand total	10,380	1,428	11,826

It was announced by President Johnson on Jan. 17, 1966, that Shriver was resigning as the corps' director in order to devote full time to the antipoverty program. Jack H. Vaughn, former assistant secretary of state for inter-American affairs, was sworn in as director on March 1.

Budget and Personnel. On August 4, House and Senate conferees approved a one-year extension of the Peace Corps and an appropriation of $114.1 million. This sum would enable the corps to expand its strength to a total of 14,800 volunteers in the field or in training by Aug. 31, 1966.

JACK H. VAUGHN
Director of the Peace Corps

PEARSON, Lester Bowles

Canadian prime minister: b. Toronto, Ont., April 23, 1897.

Lester Pearson was forced to reshuffle his cabinet several times in 1965 because of a number of scandals and hints of scandal involving members of his official family. On September 7 he called for general elections in November, hoping to bolster the Liberal party's strength in the House of Commons. The results of the election were disappointing and prompted the resignation of still another cabinet member.

The Cabinet. In January, in the wake of accusations of influence peddling and other "reprehensible" acts, Pearson had to ask for the resignations of his minister without portfolio, Yvon Dupuis, and his parliamentary secretary, Guy Rouleau. In June he accepted the resignation of Minister of Justice Guy Favreau, even though Favreau had been cleared of any wrongdoing in a bribery case. A month later Pearson took him back into the government as president of the Privy Council.

In November, Finance Minister Walter Gordon, who had urged Pearson to call the general election and had acted as the Liberal party's campaign manager, resigned as the result of the Liberals' poor showing in the election (they gained only two seats). Finally, in December, Secretary of State Maurice Lamontagne and Postmaster General René Tremblay resigned over a bankruptcy scandal in Montreal.

Foreign Affairs. In a speech on April 2 in Philadelphia, Pearson suggested a pause in the U.S. air strikes against North Vietnam to give the Hanoi government an opportunity to negotiate a peace. The next day he was a guest of President Johnson at Camp David, Md. Pearson reported that they had "argued" about his suggestion; but when President Johnson eventually ordered a lull in the bombing of North Vietnam, Canada was one of the few nations to be informed beforehand.

In June, Indian Prime Minister Shastri visited Canada to discuss world affairs with Pearson. The two leaders issued a communiqué expressing their agreement on support of the United Nations and its peacekeeping activities, on the need for disarmament and the danger of the proliferation of nuclear weapons, and on their hope for an early cessation of hostilities in Vietnam.

One result of these and other peacemaking efforts was that the 1965 Family of Man Award of the Protestant Council of the City of New York was given to Pearson on November 17. The council cited him for "helping prevent worldwide conflagrations and restoring peace." (See also CANADA.)

Career. Pearson joined the Canadian Foreign Service in 1928. He served as ambassador to the

PEARSON PLAYS HOST to British Prime Minister Harold Wilson (left) at Canadian prime minister's Ottawa home on Dec. 19, 1965. Wilson was returning to Britain from United States.

UPI

United States in 1945–46. In 1948 he was elected to the House of Commons as a Liberal. From 1948 to 1957, while serving as secretary of state for external affairs, he headed Canada's delegation to the United Nations. For his contribution to the settlement of the 1956 Suez crisis he was awarded the 1957 Nobel Peace Prize. He was elected Liberal party leader in 1958, and became prime minister in 1963.

PEDIATRICS

Rubella, amniocentesis, and fluorescent antibodies made news in pediatrics in 1965.

Rubella (German Measles). The rubella epidemic that swept the United States in early 1964 caused congenital anomalies in 10,000 to 20,000 infants born late that year and in 1965. It has been known for some time that infants born of mothers who have rubella early in pregnancy may be damaged seriously by the viral infection. The 1964 epidemic was of unprecedented severity. A large number of infants were studied, and previously unrecognized features of the post-rubella syndrome were identified.

The danger to the fetus is greatest when the mother develops rubella during the first month of pregnancy. The risk to the infant decreases thereafter, disappearing by the end of the third month. The affected infants may have one or more anomalies. Congenital heart disease, certain types of deafness, cataracts, and mental retardation often occur.

Many of the babies studied developed jaundice and other evidence of liver disease, as well as a diminished number of platelets in the blood, possibly resulting in excessive bleeding. Approximately 20% of the affected liveborn infants died, primarily of cardiac or liver disease. Stillbirths were frequent.

Live rubella virus was recovered from the throat, urine, and tissue specimens of many infants. Although these infants had developed their infection many months previously, they remained infectious, and hospital workers contracted rubella from them. Such babies continue to harbor the virus for many months, and they may be an important reservoir of the disease. It has been suggested that even apparently undamaged infants of mothers exposed to rubella be tested for virus shedding. The 1964 epidemic has resulted in intensified efforts to prepare an effective rubella vaccine.

Amniocentesis. Erythroblastosis fetalis (Rh disease) continues to be an important cause of fetal death. Although exchange transfusion is available and is an effective treatment for infants born alive, many infants are stillborn during the last weeks of pregnancy. Some of these infants would survive if they were delivered early and were appropriately treated. Until recently it has been impossible to tell which infants need early delivery, but recently a test has been developed to provide this information. A needle is inserted through the wall of the uterus and a sample of the amniotic fluid is obtained. This procedure is called amniocentesis.

The amniotic fluid is analyzed for certain chemical substances which are present only when erythroblastosis is severe, in which case premature delivery is needed. However, some infants are too immature when they develop severe erythroblastosis to be delivered prematurely. A technique has been perfected whereby these infants can be given blood transfusions while they are still inside the uterus. The infant's condition is improved, and he can benefit from additional weeks of interuterine growth.

These preliminary studies probably represent a significant medical milestone because they indicate that the infant no longer need be isolated from appropriate diagnostic and therapeutic procedures while in the uterus.

Fluorescent Antibodies. Many acute illnesses in children are due to infection by bacteria or viruses, but the specific agent can be implicated only infrequently prior to treatment. From one to several days is required to identify bacteria, and many weeks or months are needed before a specific viral agent can be isolated. A technique was developed for prompt identification of infecting organisms.

Animals form antibodies against bacteria and viruses. These antibodies become physically attached to the specific organism (antigen) that is responsible for their production. Specific antibodies can be produced and then tagged with a fluorescent material which can be seen under ultraviolet light. Material such as tonsillar exudate can then be taken from an area of infection and screened against a battery of tagged antibodies. If the antibody against the infecting organism is present, the fluorescent material accumulates on the bacteria or in the infected cells. A specific diagnosis therefore can be made to facilitate precise therapy.

WILLIAM E. SEGAR
Professor of Pediatrics
Indiana University School of Medicine

PENNSYLVANIA

The major problem confronting Pennsylvania in 1965 was the reapportionment of the state legislature. One year before, the State Supreme Court ruled that the legislature would have to reapportion its districts by Sept. 1, 1965, or the court would assume the responsibility. The Republican-controlled Senate and the Democratic-controlled House were unable to agree on a satisfactory reapportionment solution and, as a consequence, the legislature failed to meet the September 1 deadline imposed by the court. In late October, after two extensions were granted, the court recognized that the legislature was hopelessly deadlocked and reluctantly assumed responsibility for the reapportionment. The court studied the merits of different plans, but no final decision was made by the end of the year.

Integration. The state assumed legal jurisdiction in the dispute that developed over segregated Girard College in Philadelphia. Governor William Scranton's attempts to obtain voluntary integration of the school failed, and Attorney General Walter E. Alessandroni was directed to institute court proceedings to end segregation. It was hoped that an out-of-court compromise between government officials and the school's private Board of Trustees could be reached. (See PHILADELPHIA.)

Legislation. Governor Scranton submitted a record general fund budget of $1.26 billion to the legislature to cover proposed expenditures for the 1966 fiscal year. Although the proposed budget represented an increase of approximately $89 million over the budget approved by the legislature for the preceding fiscal year, the governor made no request for tax increases. As finally enacted by the legislature, the new general fund budget authorized expenditures of $1,116,314,800. Shortly before the end of the 1965 fiscal year, Governor Scranton announced that the state had accumulated a $102,713,510 surplus. In the wake of the announcement, state legislators raised their own pay scales and those of other state employees.

He also signed into law the highly controversial school bussing bill. It extended the free, state-supported, school bus service to approximately 136,000 private and parochial school students throughout the state. Opponents of the measure instituted court action to test the measure's constitutionality.

The state legislature enacted legislation bestowing formal recognition on the great Dane as the official dog of Pennsylvania. The governor allowed this measure to become law without his signature.

PENNSYLVANIA Governor Scranton (2nd from right) meets with Governors Hughes (left) of New Jersey, Rockefeller of New York, and Terry of Delaware to discuss river pollution.

WIDE WORLD

Education. The education problem in the state improved when approximately 50% of the 1966 general fund was earmarked for educational purposes. In addition, the governor suggested that a major share of the fiscal year 1965 budget surplus be returned as bonuses in the form of lower tuition rates at Pennsylvania State and Temple universities.

The public school system of Pittsburgh received a tremendous boost from a grant of $2,485,000 by the Ford Foundation. This grant, the first of its type ever awarded by the foundation, introduced a new concept of supporting systemwide educational improvements instead of isolated pilot projects.

The educational outlook was not all bright, however. Shortly before the opening of the fall semester, the trustees of the University of Pittsburgh, a private institution, announced that the university was in financial chaos. A special committee composed of state, university, and Ford Foundation representatives was appointed by the trustees to evaluate the future of the institution. Although no final solution has been reached, one plan advanced would join Pittsburgh with the other two state-supported universities, Pennsylvania State and Temple. (Temple officially became a state-related institution in December.)

PENNSYLVANIA · Information Highlights

Area: 45,333 square miles.

Population: 11,511,000 (1965 est.).

Chief Cities (1965 est.): Harrisburg, the capital (75,000); Philadelphia (2,030,000); Pittsburgh (560,000); Erie (136,000); Allentown (106,500); Scranton (105,000).

Government: *Chief Officers*—governor, William W. Scranton (Republican); lt. gov., Raymond P. Schafer (R); atty. gen., Walter E. Alessandroni (R); treas., Thomas Z. Minehart (Democrat); acting supt. of pub. instr., George W. Hoffman; chief justice, John C. Bell, Jr. *Legislature*—General Assembly (convened Jan. 5, 1965); Senate, 50 members (27 Republicans, 22 Democrats, one vacancy); House of Representatives, 209 members (93 R, 116 D).

Education: *School enrollment* (1964–65)—public elementary, 1,239,444 pupils (43,450 teachers); public secondary, 972,846 pupils (40,250 teachers); nonpublic schools, 700,600 pupils (18,520 teachers); college and university (fall 1964), 264,013 students. *Public school expenditures* (1964–65)—$975,342,000 ($479 per pupil); average teacher's salary, $6,150.

Public Finance (fiscal year 1965): *Revenues*, $2,722,172,821 (5% sales tax, $554,806,092; motor fuel tax, $235,165,230; federal funds, $491,373,551). *Expenditures*, $2,491,897,856 (education, $582,009,021; health, welfare, and safety, $454,126,794; highways, $495,009,306). *State debt*, $222,041,000 (1964).

Personal Income (1964): $29,805,000,000; average annual income per person, $2,601.

Public Assistance (fiscal year 1965): $195,179,359 to 405,370 recipients (aged, $35,217,080; dependent children, $102,616,252).

Labor Force (employed persons, June 15, 1965): *Agricultural*, 115,000; *nonagricultural* (wage and salary earners), 4,391,200 (34% manufacturing, 16% trade, 11.4% government). *Unemployed persons* (June 15, 1965), 209,000.

Manufacturing (1963): Value added by manufacture, $13,968,675,000 (transportation equipment, $727,471,000; primary metals, $2,657,808,000; nonelectrical machinery, $1,240,858,000; electrical machinery, $1,207,524,000; fabricated metals, $1,095,254,000; food and products, $1,321,387,000).

Agriculture (1964): *Cash farm income*, $801,646,000 (livestock, $572,823,000; crops, $209,759,000; govt. payments, $19,064,000). *Chief crops* (tons)—hay 3,291,000 (ranks 16th among the states); alfalfa, 1,585,000 (rank, 17th); corn, grain, 1,332,000 (rank, 14th); wheat, 444,000 (rank, 18th); oats, 403,000 (rank, 10th); apples, 240,000 (rank, 5th); barley, 176,000 (rank, 12th).

Mining (1964): *Production value*, $902,050,000 (rank 4th). *Chief minerals* (tons)—coal, 93,715,000 (ranks 2nd among the states); stone, 52,829,000 (rank, 1st); lime, 1,440,000 (rank, 2nd); zinc, 30,754 (rank, 7th); copper, 3,614 (rank, 10th); natural gas, 82,166,000,000 cubic feet (rank, 11th).

Transportation: *Roads* (1965), 111,095 miles (43,220 paved); *motor vehicles* (1965), 4,794,756; *railroads* (1963), 9,092 miles; *airlines* (1965), 16 (471 airports).

Communications (1965): *Telephones*, 5,787,900; *television stations*, 20; *radio stations*, 203; *newspapers*, 122 (daily circulation, 7,061,165).

The University of Pennsylvania celebrated the 200th anniversary of its medical school in 1965. It was announced during the year that the former surgeon general of the United States, Dr. Luther Terry, would join the university as vice president in charge of medical affairs.

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PENOLOGY. See Prisons.
PERIODICALS. See Magazines.
PERSIA. See Iran.
PERSIAN GULF STATES. See Arabia.

PERU

President Fernando Belaúnde Terry continued in 1965 to pursue his "popular cooperation" social reform program that was designed mainly to benefit the Indian and mestizo lower classes. However, the opposition parties in the legislature combined to defeat some of his financial and welfare proposals. The split between the president and the legislature widened over the handling of Communist terrorism and guerrilla activity. On September 13 the cabinet resigned to allow the president to ease political tensions by appointing a new cabinet more acceptable to the opposition parties.

Both domestic and foreign business responded favorably to Peru's relatively unrestricted economy, and improvement continued in most economic areas.

Communist Activity. The legislature, dominated by a coalition of parties opposed to many aspects of President Belaúnde's reform program, accused the government of underestimating the threat of Communist terrorism in the cities and guerrilla activity in the central and southern Andes. President Belaúnde argued that reports of such threats were "greatly exaggerated" and insisted that there were no more than 200 insurgents in the Andes. In June, nine policemen were killed and several others were wounded in surprise attacks on two police posts in the Andamarca region of the Andes. President Belaúnde then declared a suspension of constitutional guarantees for 30 days.

In August, military forces killed 21 guerrillas in the jungle terrain of Satipe, about 375 miles from Lima. In addition to regular army and air force contingents, an elite ranger company trained in counterinsurgency tactics was called into action. By September the roads leading inland from the coastal cities were tightly controlled. However, terrorists remained at large and distributed leaflets assailing "capitalist exploitation" and demanding "true agrarian reform," and "authentic democracy."

In September the opposition coalition in the legislature passed measures to meet the threat of subversion. These suspended constitutional guarantees, provided the death penalty for terrorists, and allocated $10 million to finance the counterinsurgency program of the armed forces. They also set up a committee to investigate subversion in government. Former President Manuel A. Odría claimed that guerrillas were active in nine of Peru's 23 departments, and Victor Raúl Haya de la Torre, leader of the American Popular Revolutionary Alliance (APRA), estimated that 1,055 Peruvian guerrillas had been trained in the Soviet Union, Cuba, Communist China, and North Vietnam.

Although President Belaúnde took action to curb guerrilla warfare and rebel violence in both urban and rural areas, he insisted that there was no need to establish an inter-American military force to combat subversion on a continental scale, as had been proposed by the United States and Brazil. He said, "As far as Peru is concerned, we are fully capable of taking care of our internal security."

Cabinet Crisis. In September the opposition majority in the legislature invited the cabinet to answer questions about the government's handling of Communist activity. The interrogation was expected to result in a vote of censure, which would have forced the cabinet to resign, or in a vote of dissatisfaction,

PERU · Information Highlights

Area: 496,222 square miles.
Population: 11,357,000 (June 30, 1964, est.).
Chief Cities (1961 census): Lima, the capital, 1,436,231; Callao, 155,953; Arequipa, 135,358; Trujillo, 100,130; Chiclayo, 95,667; Cuzco, 79,857.
Government: *President,* Fernando Belaúnde Terry (took office July 28, 1963); *prime minister,* Daniel Becerra de la Flor (took office Sept. 13, 1965). *Legislature*—Senate, 45 members; party seating (1965): coalition of Partido Acción Popular (AP) and Partido Demócrata Cristiano (PC), 20; Allianza Popular Revolucionario Americana (APRA), 18; Unión Nacional Odriísta (UNO), 7. Chamber of Deputies, 140 members; party seating (1965): coalition of AP and PC, 52; APRA, 58; UNO, 24; other, 6.
Religious Faiths: Roman Catholics, 95% of population.
Education: *Literacy rate* (1961)—61% of population aged 17 and over. *Total public school enrollment* (1962)—1,557,804 (primary, 1,351,714; secondary, 138,238; teacher-training, experimental, and special schools, 17,199; technical, 50,653).
Finance (1965 est.): *Revenues,* $655,000,000; *expenditures,* $655,000,000; *monetary unit,* sol (26.82 soles equal U.S.$1).
Gross National Product (1964): $2,600,000,000.
National Income (1963): $2,037,000,000; average annual income per person, $172.
Economic Indexes (1964): Agricultural production, 127 (1956–57=100); cost of living, 164 (1958=100).
Manufacturing (metric tons): Sugar (1964), 830,000; cement (1964), 828,000; gasoline (1963), 480,000; wheat flour (1963), 365,000; meat (1962), 160,000; crude steel (1964), 75,000; cotton yarn (1963), 19,400.
Crops (metric tons): Coffee (1964–65), 52,000 (ranks 14th among world producers); potatoes (1962–63), 1,232,000; maize (1964–65), 400,000; cassava (1962–63), 377,000; wheat (1963–64), 150,000; sweet potatoes and yams (1962–63), 146,000; lentils (1964–65), 6,000.
Minerals (metric tons, 1964): Silver, 37,043,217 troy ounces (ranks 2nd among world producers); iron ore, 6,605,000 (rank, 15th); zinc, 230,963 (rank, 6th); copper, 174,478 (rank, 7th); lead, 149,238 (rank, 6th); guano, 205,000; gold, 85,809 troy ounces.
Foreign Trade (1964): *Exports,* $665,900,000 (chief exports: fishmeal, $143,500,000; copper, $103,100,000; cotton, $91,400,000; sugar, $64,000,000); *imports,* $570,700,000 (chief imports, 1963: nonelectrical machinery, $112,000,000; transport equipment, $78,600,000; electrical machinery, $47,700,000). *Chief Trading Partners* (1963): U.S. (took 35% of exports, supplied 37% of imports); West Germany (took 11% of exports, supplied 13% of imports); Great Britain (took 9% of exports, supplied 7% of imports).
Transportation: *Roads* (1964), 25,276 miles (2,554 paved); *motor vehicles* (1964), 193,192 (automobiles, 110,814); *railways* (1963), 1,658 miles; *merchant vessels* (1964), 28 (128,000 gross registered tons); *national airlines,* Aerolíneas Peruanas SA and Expreso Aéreo Peruano SA; *principal airport,* Lima.
Communications: *Telephones* (1964): 126,325; *television stations* (1964), 16; *television sets* (1964), 175,000; *radios* (1963), 2,000,000; *newspapers* (1959), 53 (daily circulation, 492,000).

which would have forced the premier, Fernando Schwalb López Aldana, to resign. To avoid an open split between the executive and legislative branches, the cabinet resigned on September 13. President Belaúnde selected Senator Daniel Becerra de la Flor to serve as premier, and a new cabinet was sworn in on September 15.

Economy. Since 1960, because of a stable and freely convertible currency, few external trade restrictions, and relatively little government planning and regulation of the internal economy, Peru has achieved an annual increase in its gross national product of about 5.9%. The country's foreign trade in 1965 was more than double that of 1960.

Peru, which claims a 200-mile fishing limit off its coast, became the world leader in total fish catch in 1964. (About 6,801,300 metric tons of fish were caught in 1965.) In June 1965, Peruvian officials seized four American fishing boats from California for allegedly violating the limit.

In spite of its growing economy, Peru has a low per capita income—only slightly over $200 in 1965. However, small manufacturing industries are expanding rapidly. Between 1960 and 1963, industrial output grew 7.1% annually, and industry's share of the gross national product increased from 15% to 19.5%.

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PETROLEUM

Most of the important developments in the world petroleum industry in 1965 were continuations of significant events of the previous year. The production and export to Europe of crude oil in Libya and Nigeria maintained a rapid growth rate. The first round of drilling started in the North Sea, where at the end of 1965 about 12 huge offshore drilling units were in operation. Exploration for oil continued in Australia, and interest in exploration was renewed in Central America, Venezuela, Colombia, Mexico, and western Canada.

The petroleum industry's decline in earnings was reversed in 1965. Although depressed prices were still a problem for many companies, increased efficiency in management practices helped effect substantial savings in the petroleum industry generally.

Production. World output of crude petroleum reached a milestone in 1965 by surpassing 30,000,000 barrels daily. Production totaled 30,234,800 barrels per day—a gain of 7.6% over 1964. The rise in the Eastern Hemisphere was 1,771,600 barrels (up 11.6% from 1964); in the Western Hemisphere, 311,200 barrels (up 2.4%).

Africa showed the largest growth rate—30.5%—and production there totaled over 2,000,000 barrels daily. The increase was due primarily to Libya's increased output, which averaged 1,200,000 barrels daily.

The largest increase in volume was again in the Middle East, where output averaged 834,100 barrels daily (up 10.8% over 1964). The Middle East was still the world's major supplier, accounting for 28.3% of the total world output in 1965. Of this total, 26.4% came from Kuwait, 23.7% from Saudi Arabia, 22% from Iran, and 15.3% from Iraq. Crude oil production in the USSR rose by 8%, to 4,817,000 barrels daily; this figure represents 15.9% of the world's total supply.

In the Western Hemisphere, U.S. production in 1965 rose almost 2%, to 7,815,000 barrels daily. Canada's daily production increased 6.8%, to 804,000 barrels. In Venezuela, the world's leading oil-exporting country, production gained by 2.4%, to 3,475,000 barrels daily. On the other hand, Argentina's output dropped 5.2%, to 267,000 barrels daily. Production in other Latin American countries did not change from the preceding year.

U.S. CRUDE OIL PRODUCTION BY STATES
(Thousands of barrels)

State	1963[1]	1964[1]	Jan.–Sept. 1965
Alabama	9,175	8,493	5,808
Alaska	10,740	11,053	8,294
Arkansas	27,406	26,703	19,647
California	300,908	299,278	233,920
Colorado	38,283	34,748	25,295
Illinois	74,796	68,261	47,052
Indiana	11,902	11,349	8,102
Kansas	109,107	106,278	78,151
Kentucky	18,344	20,540	14,347
Louisiana	515,057	556,415	430,891
Michigan	15,972	15,600	11,005
Mississippi	58,619	56,786	41,724
Montana	30,870	30,646	24,088
Nebraska	21,846	19,047	13,157
New Mexico	109,941	113,457	88,778
New York	1,679	1,964	1,189
North Dakota	25,030	25,728	20,880
Ohio	6,039	16,284	10,564
Oklahoma	201,962	202,524	151,261
Pennsylvania	5,083	5,104	3,578
Texas	977,835	997,540	748,305
Utah	33,435	28,404	19,084
West Virginia	3,350	3,368	2,588
Wyoming	144,407	144,333	102,124
Others[2]	937	1,222	1,341
Total, United States[3]	2,752,723	2,805,125	2,109,832

[1] Final figures. [2] Arizona, Florida, Missouri, Nevada, South Dakota, Tennessee, Virginia, and Washington (except 1963, when no oil was produced in Washington). [3] Includes some field condensate. Source: U.S. Bureau of Mines.

Wells. The number of wells drilled decreased slightly in 1965, in line with the trend of the last several years. The estimated total of 52,165 new holes was a decrease of about 0.5% from 1964, and reflected the small decrease in the number of holes (43,950) drilled in the United States. There were increases, however, in Canada, Australia, most of South America, and western Africa.

Reserves. Proved reserves of crude oil in the world rose by 15,157,000,000 barrels, or 4.6%, during 1964, bringing the total to 341,782,000,000 barrels. Most of the gain, as in the past, was in the Middle East. Iran's reserves rose 15.5%, and Iraq's increased 8.3%. U.S. reserves showed a slight rise of about 20,000,000 barrels, to 30,990,000,000 barrels.

Consumption. The worldwide demand for crude oil and for liquid hydrocarbons derived from natural gas rose 6.4% in 1965, to a daily average of over 30,500,000 barrels. Consumption increased 4.4% in the Western Hemisphere, and 8.4% in the Eastern Hemisphere. A 3.8% gain in the United States was a significant improvement over the 1964 record and a substantial contribution to the brighter outlook in the western half of the world.

Consumption in the Eastern Hemisphere continued to show strong gains in Japan and most of Europe. Japan's increase was 15.3% for a total of 1,690,000 barrels daily. The European increase was 10.8%, to 7,380,000 barrels daily.

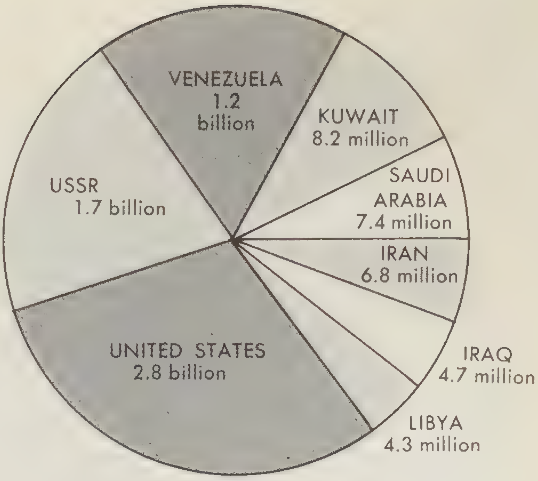
Transportation. At mid-1965 the world fleet of oil tankers of 2,000 deadweight tons and over was 3,439 vessels, totaling 85,920,958 deadweight tons. This represented a net gain of 59 ships and 4,301,999 deadweight tons, an increase of 5.3% over the total at the end of 1964. In 1964, 115 new tankers were delivered, and 56 were scrapped or converted to other uses. Total deliveries of tankers in 1965

WORLD CRUDE OIL PRODUCTION

(Thousands of barrels daily)

	1962[1]	1963[1]	1964[2]	1965[2]
North America:				
Canada	668.9	708.0	752.5	804.0
Mexico	306.4	314.7	315.8	331.0
United States	7,332.0	7,541.7	7,664.3	7,815.0
Total	8,307.3	8,564.4	8,732.6	8,307.3
South America and West Indies:				
Argentina	268.9	266.4	281.6	267.0
Bolivia	8.0	9.0	8.7	9.0
Brazil	91.5	97.7	90.7	92.0
Chile	32.0	36.2	37.4	35.0
Colombia	142.2	165.3	171.0	200.0
Cuba	0.2	0.2	0.2	0.2
Ecuador	7.0	6.8	7.6	8.0
Peru	57.9	58.8	63.2	64.0
Trinidad and Tobago	133.9	133.4	135.0	132.0
Venezuela	3,199.9	3,248.0	3,393.0	3,475.0
Total	3,941.5	4,022.8	4,188.4	4,282.2
Total, Western Hemisphere	*12,248.8*	*12,587.2*	*12,921.0*	*13,232.2*
Europe (excluding USSR and satellites):				
Austria	45.7	48.7	50.7	51.0
France	46.8	49.8	56.0	59.0
Germany, West	134.1	146.1	151.4	154.0
Italy	33.7	33.3	50.0	53.0
Netherlands	40.4	42.1	42.9	45.0
United Kingdom	2.2	2.5	2.6	2.6
Yugoslavia	29.5	31.2	36.4	38.0
Total	332.4	353.7	390.0	402.6
USSR and satellites:				
Albania	12.0	15.8	14.0	14.0
Bulgaria	4.5	4.4	3.0	4.0
Czechoslovakia	2.8	3.3	3.0	3.0
Germany, East	2.0	1.6	2.0	2.0
Hungary	33.0	36.7	37.0	38.0
Poland	4.0	4.1	6.0	6.0
Rumania	235.0	248.2	253.0	255.0
USSR	3,720.0	4,100.0	4,460.0	4,817.0
Total[3]	4,013.3	4,414.1	4,778.0	5,139.0
AFRICA:				
Algeria	433.1	499.5	552.7	560.0
Angola	9.3	15.8	17.9	18.0
Congo (Brazzaville)	2.5	2.2	1.7	2.0
Gabon	16.4	17.7	20.9	25.0
Libya	183.7	459.7	862.4	1,200.0
Morocco	2.6	3.1	2.5	3.0
Nigeria	67.5	75.7	119.3	250.0
Total	715.1	1,073.7	1,577.4	2,058.0
Middle East:				
Abu Dhabi, Trucial Oman	15.2	48.1	188.4	284.0
Bahrain	45.1	45.2	49.2	55.0
Iran	1,320.4	1,474.3	1,690.5	1,880.0
Iraq	1,005.0	1,157.8	1,254.2	1,310.0
Israel	3.1	3.0	3.9	4.0
Kuwait	1,833.7	1,932.8	2,117.0	2,252.0
Neutral Zone	244.0	313.8	359.1	370.0
Qatar	186.1	192.1	212.4	215.0
Saudi Arabia	1,520.7	1,629.0	1,716.1	2,030.0
Turkey	11.4	13.9	16.9	29.0
United Arab Republic	88.6	106.2	119.2	132.0
Total	6,273.3	6,916.3	7,726.9	8,561.0
Far East and Oceania:				
Australia	—	—	4.1	7.0
Brunei and Sarawak	77.5	70.2	74.3	75.0
Burma	12.0	13.0	11.4	12.0
Communist China	115.0	110.0	160.0	170.0
India	20.1	33.6	45.0	56.0
Indonesia	459.6	454.6	441.2	500.0
Japan	14.6	15.0	12.5	12.0
New Guinea[4]	2.5	2.3	—	—
Pakistan	9.1	9.6	10.2	10.0
Total	710.4	708.3	758.7	842.0
Total, Eastern Hemisphere	*12,044.5*	*13,466.1*	*15,231.0*	*17,002.6*
World total	24,293.3	26,053.3	28,152.0	30,234.8

[1] Final. [2] Preliminary. [3] Because of the use of several sources of data for the USSR and its satellites, the figures given for the individual countries do not always add up to the total shown for the group. [4] Starting with 1964, New Guinea is included with Indonesia's total. (Sources: U.S. Bureau of Mines and *World Petroleum*.)



1965 WORLD PETROLEUM PRODUCTION
(Estimated Number of Barrels)

were estimated at close to 10,000,000 deadweight tons, and deliveries scheduled for 1966 will almost be equal to that figure.

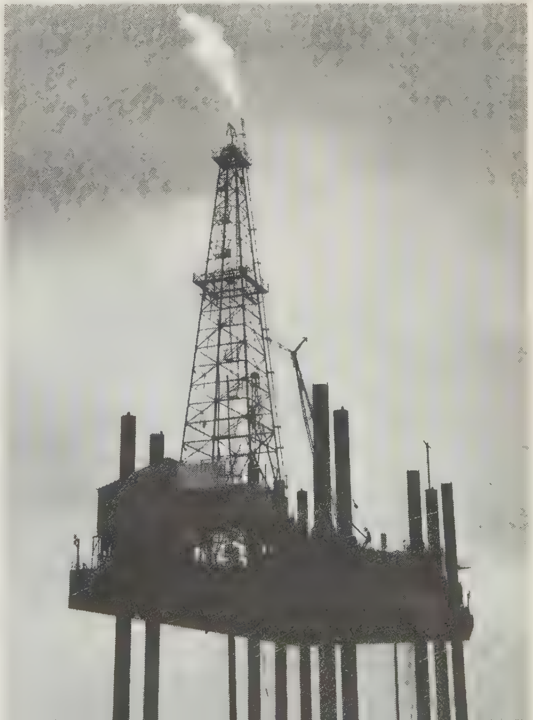
Tanker size also continued to increase. The average deadweight tons of the ships in operation at mid-1965 was 27,858, but the average tonnage of the ships delivered in the first six months of the year was 51,545. Tankers on order as of midyear averaged 67,175 deadweight tons. The order for tankers of 100,000 deadweight tons or larger increased from 16 at mid-1964 to 33 at mid-1965, with at least five more in the negotiation stage.

Most of the carrying capacity in 1965 continued to be represented by the flag fleets of four countries. Liberia, with 17,471,861 deadweight tons, had 20.33% of the carrying capacity; Norway, with 12,887,545 deadweight tons, 15%; Britain, with 11,833,356 deadweight tons, 13.77%; and the United States, with 8,702,837 deadweight tons, just over 10%.

Pipelines. Most of the major pipeline projects in 1965 were in Europe and Asia, primarily from Mediterranean and Adriatic ports to Germany and Austria, eastward, across Siberia, from the USSR's major crude oilfields in the Urals. An increasing network of oil and natural gas lines was also under

EXPERIMENTAL DRILLING FOR GAS was conducted by a British firm in the North Sea off the Humber estuary. On Dec. 27, 1965, the drilling rig collapsed and sank.

UPI



construction from oilfields in Algeria and Libya to ports on the Mediterranean. The diameter of pipe used increased to about 40 inches, and the capacity of most of the new lines rose to 500,000 or more barrels daily.

Refining. Worldwide capacity for crude oil distillation rose to 33,230,000 barrels daily in 1965—an increase of 5.8%. Capacity in the non-Communist world alone gained by 5%, to 28,741,900 barrels daily. Once again, the major share of the growth was in the Eastern Hemisphere, which increased capacity by 1,500,000 barrels daily.

Downstream processing, which continued to be dominated by the increased use of hydrogen processes, rose 6.2% in 1965, to 4,949,000 barrels daily. Catalytic cracking, with a modest 1.4% growth, reached 5,743,000 barrels daily; and catalytic reforming increased 5.3%, to 3,825,000 barrels daily.

There were 939 petrochemical plants in operation in 1965—an increase of 2.7% over the previous year's level. Western Hemisphere plants accounted for 65% of the total—a decrease of 3.5% from 1964.

Natural Gas. The estimated total of 721.5 trillion cubic feet of natural gas reserves has not been revised for several years. The United States has 274 trillion cubic feet of this total; the Middle East, 180 trillion; the USSR, 75 trillion; Africa, 54 trillion; and the Netherlands, 38.5 trillion.

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PHILADELPHIA

Philadelphia (pop.: city, mid-1965 est., 2,067,000; metropolitan area, mid-1964 est., 4,632,000) experienced a year of relative calm in 1965, in contrast to the explosive racial discord that hit the city in 1964. Some civil right demonstrations took place, however, with Girard College, a private elementary and secondary school for boys, as the focal point of attention.

Girard College Controversy. Girard College, established under the will of Stephen Girard (1750–1831) as a school for "poor, white male orphans," was the prime civil rights target. In May, the Philadelphia chapter of the National Association for the Advancement of Colored People (NAACP) began a concerted drive to "break the will." Hundreds of pickets (and a corresponding number of police) appeared daily outside the college gates. Martin Luther King, Jr., came to the city in support of the NAACP cause. Numerous attempts by local, state, and federal officials to achieve voluntary integration were rejected by the school's board of trustees. Finally, the state attorney general, Walter E. Alessandroni, in response to a direct order of the governor, William W. Scranton, attempted to obtain a court order that would terminate segregation in the school.

Elections. In the election on November 2, the Republican candidate for district attorney, Arlen Specter, upset the Democratic incumbent, James Crumlish, in the first citywide Republican victory since 1953. In the only other major contest, the Democratic city controller, Alexander Hempill, was reelected to a third four-year term. City voters also approved four loan requests that will permit the city to borrow a total of $82,450,000 for improvement and expansion projects.

Board of Education Reorganized. In the May primary election, Philadelphia voters approved a proposal to replace the 15-member board of education with a 9-member board. A nominating panel submitted two lists of nominees to Mayor James H.J. Tate for final selection. Former Mayor Richardson Dilworth was named president of the new board, which will take office in December 1965. Cecil Moore, director of Philadelphia's NAACP chapter, instituted legal proceedings to contest the validity of the selection process.

New Community College. Philadelphia Community College, the first of its kind in the city, opened its doors in September 1965. The initial enrollment was 750 full-time day students and 1,000 part-time evening students.

School Operations. The 1966 operating budget that the Philadelphia Board of Education submitted to the City Council called for expenditures of $191 million, or an increase of $43 million over 1965 appropriated funds. The retiring school board president, J. Harry LaBrum, who submitted the budget, said he felt the state could provide the funds for the increase. Of the total amount, $19 million was earmarked for salary increases for teachers and other school personnel.

At the beginning of the 1965 school year, public school enrollment in Philadelphia was 276,347, a decrease of 1,543 from the previous year.

New U.S. Mint. The federal government obtained congressional approval of expenditure of approxi-

CITY OF PHILADELPHIA

IN PHILADELPHIA, Girard College is picketed by NAACP members in May, in an effort to "break the will" that established the institution in 1831 as an all-white school.

mately $35 million for a new U.S. mint in Philadelphia. Construction was begun in 1965.

City Budget. A record operating budget of $365.3 million for the 1966 fiscal year was presented to the City Council by Mayor Tate. The new budget is $37.5 million higher than the 1965 budget. The mayor proposed increases in the city wage tax and the real estate tax to meet the higher operating costs.

Economy. Unemployment in the Philadelphia metropolitan area for the first nine months of 1965 averaged 64,400, or 3.4% of the estimated civilian work force. The figure represented a 1.4% decrease in unemployment over the average for the comparable period of 1964.

A total of $132,325,784 in building permits was issued through September 1965, an increase of 12.2% over the first nine months of 1964.

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PHILANTHROPY

Federal legislation during 1965 in fields traditionally served by private giving raised questions about the future direction of philanthropy. New federal programs were established to support public education in poverty-ridden areas, medical care for the aged, and higher education. As the government assumes a larger share of the burden of these activities, private philanthropy may be able to devote more of its resources to the prevention, rather than the cure, of social ills.

In spite of expanding public programs, private philanthropy continued to grow vigorously. Past increases in the major categories of giving were sustained in 1965, with total private donations probably exceeding $13 billion. Indicative of the rise is the increase in private donations to the 2,200 United States and Canadian community chests and united funds, from $458 million in 1960 to $580 million in 1965. Corporation giving has also shown a considerable increase.

Congressional passage of Medicare legislation in 1965 probably will have direct consequences on philanthropic support of hospitals. Of the 7,138 hospitals in the United States, 3,394 are nonprofit voluntary hospitals which rely on private giving for part of their support. Of the $1.44 billion spent for new hospital construction in 1964, an estimated $832 million came from gifts. An additional $400 million was donated for current budgets, and $150 million went into endowment funds.

Increased support for the arts was evident in 1965. In June the John F. Kennedy Center for the Performing Arts in Washington, D.C., surpassed its public contributions goal of $15.5 million. In September, Congress established the National Foundation on the Arts and Humanities and appropriated $63 million for the first three years of the program. In October, the Ford Foundation announced grants totaling $85 million to symphony orchestras throughout the United States.

Individuals and families are the largest single class of donors to philanthropic programs, accounting for about four fifths of total giving. In 1962, deductions for contributions itemized on 25.1 million individual income tax returns totaled $7.5 billion. Of this sum, $5.4 billion, or 71%, was given by 23.3 million persons or families whose total annual income was less than $15,000.

In February 1965, a report from the U.S. Treasury Department proposed changes in laws relating to private foundations. The proposals would restrict dealings between foundations and their donors, reduce delay in transmitting funds to charitable recipients, limit direct foundation involvement with business, prohibit speculation in securities, and require the broadening of foundation management. Noting that foundations have "preserved fluidity and provided impetus for change within the structure of American philanthropy," the report estimated that in 1962 the more than 15,000 foundations in the United States made grants and related outlays of $1 billion. The Ford Foundation alone accounted for $223 million of this total with numerous grants in different fields.

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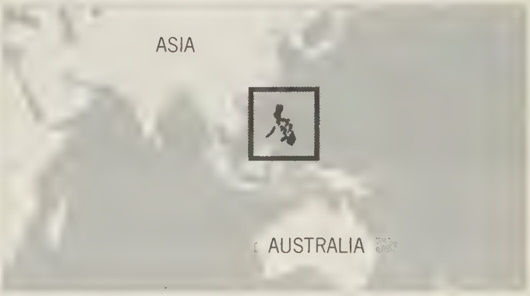
PHILATELY. See Stamp Collecting.

PHILIPPINES



The election of Ferdinand E. Marcos as president of the Philippines on Nov. 9, 1965, capped an exhausting, year-long campaign. While politicians scrambled for votes, unpopular tax legislation was delayed, and the country's economy suffered. In the area of foreign affairs, the Philippine and United States governments reached agreement on the question of criminal jurisdiction under the 1947 military bases treaty.

Elections. In the presidential election, Senate President Ferdinand E. Marcos, candidate of the Nationalist party, decisively defeated the incumbent president, Diosdado P. Macapagal, who ran for reelection on the Liberal party ticket. Marcos received 3,861,324 votes, and Macapagal, 3,187,752. Marcos' running mate, Senator Fernando Lopez, defeated Macapagal's choice, Senator Gerardo Roxas, in the vice presidential contest by a vote of 3,531,550 to 3,504,826.

During the hard-fought campaign, the Nationalists attacked the Macapagal administration for bureaucratic corruption and economic disorders. Opponents of Marcos charged him with misappropriating farmlands, forgery, and passing bad checks. In the months before the balloting, at least 48 political murders were committed, and on election day many voting irregularities were reported.

Also at stake in the elections were eight Senate seats and all 104 seats in the House of Representatives. The results gave 6 Senate seats to the Nationalists (for a total of 11) and 2 to the Liberals; 59 House seats to the Liberals, 36 to the Nationalists, and 9 to independents. President-elect Marcos therefore would be faced with a lower house dominated by the opposition Liberals.

UPI

TAAL VOLCANO IN THE PHILIPPINES, dormant for 50 years, erupted on Sept. 28, 1965, killing 208 persons.

FERDINAND EDRALIN MARCOS was elected the sixth president of the Philippines on Nov. 9, 1965, defeating incumbent President Diosdado Macapagal after a long and fierce campaign. Marcos, the nation's most decorated war hero and a brilliant congressman, has the reputation of being strong willed and unpredictable. Although he declared his intention to "set a new moral tone" at home and to maintain cordial relations with the United States, many observers were unsure of what course his leadership would take.

The son of a wealthy family active in politics, Marcos was born in Sarrat, Ilocos Norte, on Sept. 11, 1917. As a law student at the University of the Philippines, he chalked up records in scholarship and sports. During World War II he fought as a guerrilla officer beside American soldiers. Elected to the House of Representatives in 1949 and to the Senate in 1959, he became Senate President on April 6, 1963. Shortly afterward he left Macapagal's Liberal Party to become the standard bearer of the Nationalists.

Domestic Affairs. In January and November there were reports of Communist guerrilla activity among Huk tribesmen in northern Luzon, the scene of a rebellion in 1950. Although the outlawed Philippine Communist party has shifted to a "legal" phase, government security officials did not rule out the possibility of a renewal of the Huk movement.

Taal volcano, inactive since 1911, erupted on the morning of Sept. 28, 1965, bringing death and desolation to Mt. Taal Island in Lake Taal. The disaster claimed 208 lives.

Economy. Consideration of the possible effects upon the electorate of certain legislative measures influenced the action of Congress in 1965. Tax measures intended to increase government income were set aside, but the minimum daily wage was raised from 4 to 6 pesos. In view of Congress' failure to pass his Omnibus Tariff Bill, President Macapagal, by executive order, revised the existing tariff in an effort to encourage new industries and discourage smuggling.

Although the Supreme Court affirmed the right of the Central Bank to retain 20% of exporters' foreign exchange receipts, the restriction was lifted on the bank's own recommendation late in the year. The Philippine peso was officially pegged at 3.90 to one U.S. dollar.

Foreign Affairs. On August 10 the United States and Philippine governments signed an agreement under which the United States renounced the right to exercise jurisdiction over Filipino citizens involved in offenses within the American military bases, and recognized the right of Philippine courts to exercise jurisdiction over Americans involved in offenses inside or outside base areas. The agreement was expected to remove sources of misunderstanding that could cause tension in Philippine-American relations. Agitation against the bases has alarmed the U.S. government because of their strategic importance in the Vietnam war effort.

Philippine-Indonesian relations reached a low ebb early in 1965, as each nation charged the other with subversion. The Philippines adopted a friendlier attitude toward Malaysia, but still withheld diplomatic recognition because of its unsettled claim to territory in the Malaysian state of Sabah.

PHILIPPINES · Information Highlights

Area: 115,707 square miles.

Population: 32,629,000 (Sept. 30, 1965 est.).

Chief Cities (1960 census): Quezon City, the capital, 397,990; Manila, 1,138,611; Cebu, 251,146; Davao, 225,712.

Government: *President*—Ferdinand Edralin Marcos (took office Dec. 30, 1965); *Vice President*—Fernando Lopez. *Congress*—House of Representatives, 104 members (party seating, 1966: Liberals, 59; Nationalists, 36; Independents, 9); Senate, 24 members (party seating, 1966: Nationalists, 11; Liberals, 9; others, 4).

Religious Faiths: Roman Catholics, 86% of population; others, 14%.

Education: *Literacy rate* (1960)—72% of population aged 15 and over. *Total school enrollment* (1960)—5,124,442 (primary, 4,197,489; secondary, 564,197; technical, 94,553; higher, 268,203).

Finance (1965 est.): *Revenues,* $558,100,000; *expenditures,* $627,400,000; *public debt,* $889,300,000; *monetary unit,* peso (3.90 pesos equal U.S.$1).

Gross National Product (1963): $4,332,000,000.

National Income (1964): $4,097,000,000; average annual income per person, $131.

Economic Indexes (1964): *Manufacturing production,* 145 (1958 = 100); *agricultural production,* 137 (1956–57 = 100); *cost of living,* 127 (1958 = 100).

Manufacturing (metric tons, 1964): Sugar, 1,941,000; cement, 1,062,000; gasoline (1963), 990,000; wheat flour, 298,800; meat (1963), 205,000; cotton yarn, 14,160; lumber (1963), 1,138,000 cubic meters.

Crops (metric tons, 1964–65 crop year): Rice, 4,002,000 (ranks 10th among world producers); maize, 1,299,000 (rank, 17th); abaca fibers (1963–64), 120,000 (rank, 1st); sweet potatoes and yams, 798,000.

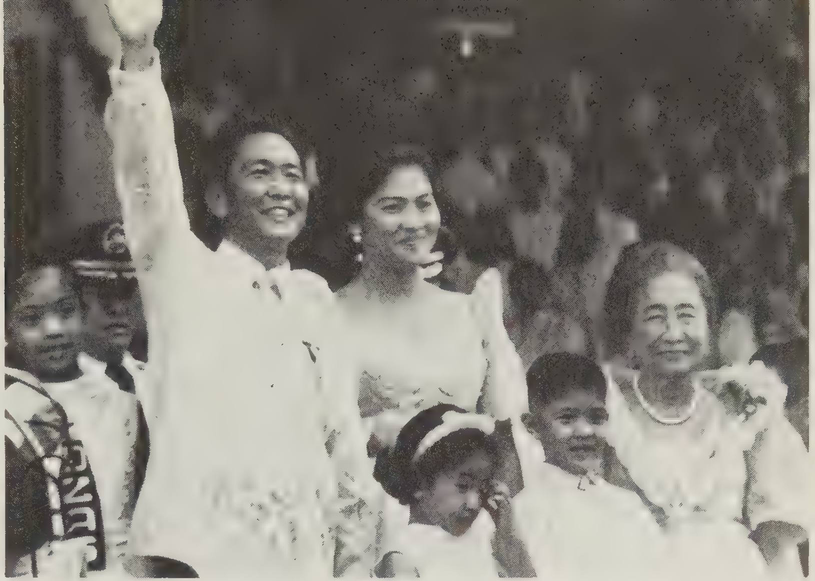
Minerals (metric tons, 1964): Chromite (1963), 456,206 (ranks 3rd among world producers); copper, 60,456 (rank, 12th); gold, 425,770 troy ounces (rank, 8th); iron ore, 1,367,000; bituminous coal, 127,000; lime, 78,000; silver, 851,814 troy ounces.

Foreign Trade (1964): *Exports,* $742,000,000 (chief exports: coconut products, $246,000,000; sugar, $148,300,000; wood, $143,100,000; abaca, $30,400,000); *imports,* $868,500,000 (chief imports, 1963: nonelectrical machinery, $115,970,000; motor vehicles, $54,930,000; crude petroleum, $50,220,000). *Chief trading partners* (1963): U.S. (took 46% of exports, supplied 45% of imports); Japan (took 27% of exports, supplied 18% of imports); West Germany (took 7% of exports, supplied 6% of imports).

Transportation: *Roads* (1964), 34,308 miles (5,615 paved); *motor vehicles* (1964), 250,698 (automobiles, 115,524); *railways* (1963), 633 miles; *merchant vessels* (1964), 81 (432,000 gross registered tons); *national airline,* Philippine Air Lines; *principal airport,* Manila.

Communications: *Telephones* (1964): 146,663; *television stations* (1964), 12; *television sets* (1964), 70,000; *radios* (1963), 1,220,000; *newspapers* (1962), 20 (daily circulation, 535,000).

PHILIPPINE PRESIDENT Ferdinand E. Marcos greets crowd on inauguration day, Dec. 30, 1965. With him on the reviewing stand are his wife, Mrs. Imelda Marcos, his mother, Mrs. Josefa Marcos, and his three children.



UPI

The fourth centenary of the Christianization of the Philippines was commemorated April 27 to May 3.

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PHILOSOPHY

Present-day philosophy is divided into two distinct schools—analytic and speculative. The division is marked by a fundamental disagreement concerning the proper nature and function of philosophy. The controversy between the two schools was heightened in 1965 when Richard Bernstein, of Yale University, editor of speculative philosophy's *Review of Metaphysics,* did not receive a tenure appointment. The incident, according to some observers, demonstrated anew the strength that analytic philosophy has in Anglo-American philosophy.

Phenomenology. Interestingly, phenomenology, which many analytic philosophers reject as speculative, has gradually increased its influence in the United States. Many books by the important French phenomenologist, Maurice Merleau-Ponty, were translated into English in 1965, as was Edmund Husserl's *The Phenomenology of Internal Time-Consciousness.* The journal, *The Monist,* devoted a special issue (January 1965) to "Linguistic Analysis and Phenomenology." Several contributors pointed out the similarities, rather than the differences, between phenomenology and linguistic or analytic philosophy.

Existentialism. Although existentialism has attracted greater popular interest than philosophical attention, the situation is gradually changing. The works of Jean-Paul Sartre are widely read and discussed, and his autobiography, *The Words,* was translated into English in 1965. Moreover, the *Journal of Existential Psychiatry* was expanded and renamed *The Journal of Existentialism* in order to devote more attention to existential philosophy. Maurice Friedman's critical reader, *The Worlds of Existentialism,* was one of many new books on the subject.

Martin Buber, the Jewish theologian, philosopher, and mystic, died in Israel on June 13, 1965. He has long been considered a leading advocate of religious existentialism. (See NECROLOGY.)

Science and Philosophy. Philosophers in the United States as distinct from their British and Continental counterparts, maintain a strong interest in science. For example, Carl C. Hempel's *Aspects of Scientific Explanation* examines various concepts, theories, and rational beliefs in natural science, social science, and history.

Social Philosophy. Other American philosophers continued to express interest in social questions, no doubt as the result of the influence of pragmatism. Sidney Hook edited the symposium, *Law and Philosophy* (1964). Also, the Council for Philosophical Studies was founded during 1965 to deal with, among other things, "problems that concern the relation of philosophy to social and political problems."

American Philosophy. Two books on the history of American philosophy published late in 1964 attracted considerable attention during 1965. They were *John Dewey and Arthur F. Bentley: A Philosophical Correspondence, 1932–51,* edited by Sidney Ratner, and *Studies in the Philosophy of Charles Sanders Peirce,* edited by E.C. Moore and R.S. Robin. The Charles S. Peirce Society, at a meeting held in conjunction with the American Philosophical Association's eastern division meeting in December 1964, commemorated the 50th anniversary of Peirce's death.

Traditional Areas of Philosophy. In metaphysics, Donald C. Williams published *Principles of Empirical Realism* in 1965. Late in 1964, Milton K. Munitz published *The Mystery of Existence: An Essay in Philosophical Cosmology,* dealing with the question "Why is there a world at all?" Munitz' book countered the views of both theists and positivists.

In the history of philosophy, Jacob Loewenberg published his "Carus Lectures" under the title *Hegel's Phenomenology, Dialogues on the Life of Mind.* Other 1965 publications included *Aristotle's Vision of Nature,* the collected lectures of F.J.E. Woodbridge (1867–1940), and *Hegel,* by Walter Kaufmann.

In ethics, Jacques Maritain published *Moral Philosophy: An Historical and Critical Survey of the Great Systems* (1964). Arthur E. Murphy's posthumously published "Carus Lectures" were entitled *The Theory of Practical Reason.* In logic, W.V.O. Quine published *Set Theory and Its Logic* (1964).

UNESCO Directory. The *International Directory of Philosophy and Philosophers* was published in 1965. It brings together detailed information on philosophy in 90 countries or areas of the world.

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PHOTOGRAPHY

NEWSPAPER NATIONAL SNAPSHOT AWARDS

PHOTOGRAPHY

Advances in photography in 1965 provided more versatile tools for the professional photographer, more sensitive materials for the scientist, and increased convenience for the amateur. Trade was stimulated by the midyear repeal of the federal excise tax on manufacturers, which had amounted to 5 or 10% of the cost of most photographic equipment. The International Photographic Exposition, held in New York City in May 1965, presented a great variety of new apparatus and sensitive materials.

Super-8 Movie Equipment. An innovation that had a great impact on the field of photography in 1965 was the commercial introduction of the Super-8 movie format, which provides a larger picture area and better sound quality than the regular 8-mm format. The new Super-8 system has a 50% larger image, a higher frame rate (18 frames per second), and smaller sprocket holes. The higher speed of the film through the camera and projector provides better fidelity in sound movies.

All Super-8 movie cameras accept a square plastic cartridge containing 50 feet of film. Code notches on the cartridge set the control system of automatic cameras for the proper film type and speed. Acetate-base film of conventional thickness unwinds from one of two coaxial cores, travels over a pressure plate at the exposure aperture, and passes to the other core. This design prevents film from being run inadvertently through the camera twice. The Super-8 system is designed primarily for a color film balanced for artificial light. A filter, built into all cameras to convert the film to daylight use, is displaced when a movie flood lamp is fitted on the camera.

Many manufacturers introduced Super-8 cameras and projectors that range from simple models to elaborate professional equipment. Automatic exposure control, electric drive, and zoom lens—special-equipment features only a short while ago—are now practically standard items.

The Eumig Viennette Camera is remarkable for its boldness and elegance of styling. The DeJur Electra VII Camera has an f/1.8, 4-to-1 power zoom lens. The Bell and Howell Autoload Camera has overcome the diffraction troubles usually present when short-focal-length movie camera lenses are stopped down to small apertures. A tiny spot of a neutral coating deposited in the center of the lens permits light transmittances equivalent to f/64.

Single-8 Equipment. In the Single-8 system, introduced by Fuji of Japan, the design of film components—picture, sound track, sprocket holes—is the same as that for the Super-8 system, but the cartridge design is different. The flat, tall, plastic cartridge contains two tandem cores that hold a 50-foot length of thin polyester-base film, which provides 50% more footage in a given space than is possible with heavier acetate bases. Code notches on the cartridge operate the automatic exposure control for proper film speed setting. The shape of the cartridge permits the design of slim, pocketable cameras, such as those made by Fuji.

Versatile Super-8 Cameras. For nonamateur applications of the Super-8 system—educational films, for example—there are cameras of great versatility. The Pathe Professional Reflex DS 8/BTL automatically can thread a 400-foot roll of double Super-8 perforated film. Other features include a behind-the-lens exposure control system, speeds of 8 to 80 frames per second, a variable shutter, and a frame counter. The Beaulieu S 2008 Camera, which has many similar capabilities, also has provisions for synchronous operation with an external tape recorder. J-M Developments, Inc., is developing an optical sound system for use with Super-8 Eastman Color release prints.

NEWSPAPER NATIONAL SNAPSHOT AWARDS

SECOND-PRIZE PHOTO in 1965 Newspaper National Snapshot Awards, by Donald Kearns, Andover, Mass., was praised for humor and technical quality.

ADROIT CAMERA WORK by Robert L. Meyers won top honors in the 1965 Newspaper National Snapshot Awards.

Honeywell introduced the Elmo Tri-o-Matic Camera, which uses different inserts to adapt it for Single-8 or Super-8 cartridges or conventional Double-8 rolls. Reverse filming in Single-8 and Double-8 format can be used to make lap dissolves.

Because the main distinction between Super-8 and Single-8 systems is in the camera cartridge, the two systems are practically identical with respect to editing, splicing, and projection equipment. Yashica, Kalart, and Atlas-Warner have developed film editors for Super-8 and Single-8 films. The Craig Master Six Splicer will make splices of any 8-mm or 16-mm films.

Projectors. The Eumig Mark M Projector for Super-8 films features a quartz-iodine lamp, automatic threading, and a zoom lens. One DeJur Super-8 projector has a small integral rear-projection screen for private viewing. Another DeJur model handles interspliced regular-8 and Super-8 films; a turn of a knob adjusts the projection gate and pulldown mechanism for the different formats. Kodak also makes a projector that will show both 8-mm formats. The Bolex 18-5 Projector, which can be fitted with long-focal-length lenses for use in large halls, has provisions for slow-motion projection and synchronization with a separate tape recorder. Kodak, Fuji, and Eumig have models for magnetically striped sound film.

Still Cameras. The 35-mm single-lens reflex camera with behind-the-lens exposure measurement is becoming more popular. The Honeywell Pentax Spotmatic contains a pair of cadmium sulfide (CdS) cells that measure the light focused on the ground glass. The Canon Pellix uses a stationary, extremely thin pellicle to direct a portion of the light to a viewing screen. A CdS cell mounted on a swinging arm just in front of the exposure plane flips aside shortly before the shutter operates.

The Leicaflex, announced in 1965, contains many features of other single-lens reflex cameras, and it has a few extras. The electronic flash is synchronized at 1/100 second, and the top shutter speed is 1/2000 second. A series of special achromatic close-up lenses, offered for the Leicaflex, do not require extension rings or bellows, and thus retain in close-up photography the automatic features of the lenses.

Single-frame (or half-frame) 35-mm cameras with many automatic features were presented in 1965. The Olympus Pen-EM Camera is electrically operated, including film advance and rewind. A CdS cell, which controls an electronically actuated leaf shutter, monitors light intensity during exposure. The Yashica Electro-Half Camera has an electronic shutter. Late in 1965, Kodak provided single-frame mounting services at its processing laboratories.

Many new cameras have simplified loading systems. In 1965, Ricoh, Voigtlander, Yashica, Argus, Kodak, and Imperial showed new models that use the 126-size (Instamatic) cartridge. The Rapid System of loading 35-mm film cartridges is being incorporated in many German and Japanese cameras. Rapid cartridges may be used in double-frame and single-frame cameras, and in square-format cameras, such as the Fujica Rapid S and S-2. The Canon QL film-loading system, used in the new Canonet QL camera, accepts standard 35-mm cassettes. A shaped spring-steel plate and guide rollers lead the film to the take-up spool. The film is rewound into its original cassette.

A modular component system introduced in 1965—the Graflex xl Camera System—has quickly interchangeable components that include eight lenses (47 to 180-mm) set in Synchro-Compur shutters; normal backs that accept 120- and 220-size rolls, 70-mm film, and wide-angle camera bodies; and different film and Polaroid Packs. The Koni-Omega Rapid Camera is a functionally designed roll-film camera that makes 10 exposures on 120-size film or 20 exposures on 220-size film held in interchangeable backs.

The Yashica Atoron Ultraminiature Camera uses 9.5-mm film in Minox-type cartridges. It has an 18-mm, f/2.8, fixed-focus lens.

The direct-color Fotochrome Camera, announced in 1965, uses a special sensitive material that is developed directly as a color print. No negative is produced. The camera has a 45° mirror behind the lens to provide optical reversal of the image, as is necessary in any direct print system. Other features include automatic exposure control, an f/4.5 lens, and an integral flash unit.

A special camera designed for Gemini astronauts by J.A. Maurer, Inc., has a 160° wide-angle lens coverage and a 2-mm effective focal length. It makes still exposures or motion pictures on 16-mm film.

Instant-Developing Cameras. The Crislin Instacamera, introduced by the Camera Corporation of America in 1965, produces finished black-and-white prints in one minute. It is loaded with a special cartridge that contains sensitive material and chemicals. Model 20 of the Polaroid Swinger Camera uses 3000-speed film and delivers black-and-white prints in 10 seconds. The correct exposure setting is determined by the photographer who matches the intensity of the reflected scene illumination against an internal standard provided by a very small electric lamp. In making this setting, the aperture of the 100-mm lens varies between f/17 and f/96, with the shutter speed fixed at 1/200 second.

Polaroid introduced apparatus to use its instant-developing materials for three special applications. A modular close-up camera for medical and technical use, which produces images that are one fourth, 1, 2, and 3 times natural size, has an electronic flash ring around the lens for shadowless lighting. A portrait system, providing six poses on a 4-by-5-inch format, gives an instant proof print as well as a film negative for enlargements. An identification photograph system makes laminated color or black-and-white badges and cards that contain a portrait and printed data.

Lenses. Afocal supplementary lenses of the Barlow type, such as Telextenders and similar lenses, are a popular accessory for 35-mm single-lens reflex cameras. These lenses, placed between the prime lens and the camera, produce an effective focal length two or three times that of the prime lens alone.

The basic unit of Enna Auto-Magic Interchangeable Lens System (Enna Optical Works, Munich) is an automatic diaphragm mechanism that acts as a holder for special bayonet-mounted lens groups. Seven lens groups, with 24- to 240-mm focal lengths, are offered. The diaphragm mechanism is available in forms to fit many single-lens reflex cameras.

Several special-purpose lenses are of particular note. The Medical-Nikkor lens (200-mm, f/5.5) for the Nikon F Camera, which has a xenon flash tube that encircles the lens, is designed to work at magnifications of one fifteenth to 3 times. The magnification is automatically recorded on the film. The Kinoptic Tegea lens (9.8-mm, f/1.8) for 35-mm motion picture cameras encompasses a 108° field of view. A special lens for microphotography, developed by Dr. Frank Back, gives a reduction of 500 times. The lens forms the image in the plane of its rear surface, against which the film is placed for exposure. This lens is a key part of an information storage and retrieval system that achieves enormous compression of data by means of this great reduction.

Shutters. Electronic shutters were introduced by Copal of Japan and by Compur and Prontor of Germany. Instead of using mechanical or pneumatic devices, these between-the-lens leaf shutters have electronic circuits to control the duration of the exposure. The Copal Elec shutter provides continuously variable exposure times that range from 2 minutes to 1/500 second. It is used in the Yashica Electro-Half Camera, in which a CdS cell determines the proper time, and a 5.6-volt mercury battery provides the power. The Prontor-Press Electronic Shutter uses high-precision resistors and capacitors for electromagnetic control of the shutter operating springs. The Compur Electronic Shutter 5FS is contained in a sleek, uncluttered housing. A remote-control box connected by an electric cable has dials for setting shutter speed and lens aperture, and for cocking and releasing the shutter. Rodenstock, Schneider, and Voigtlander offer 45 lenses mounted in the new Compur shutters.

Exposure Meters. The Gossen Sinarsix Focal Plane Exposure Meter provides a behind-the-lens exposure measurement for cameras with 4-by-5-inch and 5-by-7-inch formats. The sensitive element, a 1/10-square-inch area on the end of a long probe, may be positioned at the focal plane to read the relative brightness of individual elements in the scene to be photographed. Behind-the-lens exposure measurement, which was extended to these large-format cameras, has been a popular feature in modern 35-mm cameras.

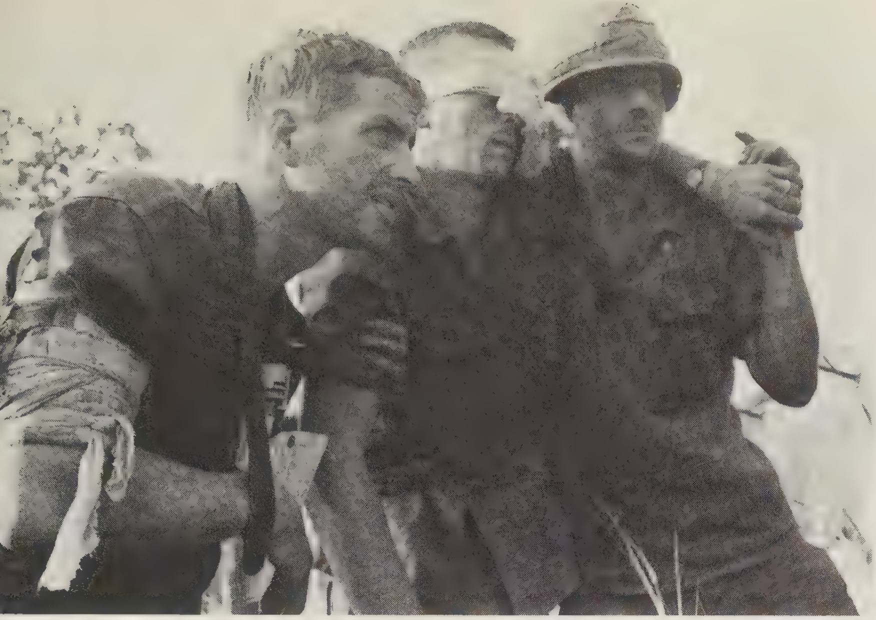
The Minolta Viewmeter 9 is a CdS meter with a 9° acceptance angle. The Honeywell Pentax 1°/21° Exposure Meter is a reflex viewing unit that reads a 1° spot in the center of a 21° field.

Sensitive Materials. Dynachrome films have new higher ASA speed ratings—ASA 25 (daylight) and ASA 40 (tungsten light). Agfachrome CK17 film, Type A, is available in Super-8 and Double-8 packaging. Fuji offers ASA 25 reversal color film and ASA 50 and ASA 200 reversal black-and-white films in Single-8 cassettes. Kodak Panatomic-X Film provides improved antihalation protection by using a dye under the emulsion that is bleached during processing. Eastman Ektachrome EF films for ambient-light photography and color television news reporting have a wide exposure latitude, which is adjustable in processing. The new process at 100°F is three times as fast as the previous process. Kalvar Instant 80 Film is a general-purpose, nonsilver-halide, microimage print film that is exposed by light and cleared by an ultraviolet flash. Wet processing is not involved.

A new type of plate for astronomy, designed at the Kodak Research Laboratories, is so sensitive that the size of the photographable universe is more than doubled. The finding was confirmed by tests at Mt. Wilson and Mt. Palomar observatories.

In 1965 Ansco introduced Allura Paper, a high-speed, warm-tone enlarging paper for portrait printing that is available in five surfaces. New Kodak Ektacolor papers provide better dye stability, truer colors, and simplified processing to suit the needs of photofinishers and professional photographers.

Lighting. The amateur photographer's dilemma over using white or blue flash bulbs with color films appears to be solved by a mutual agreement between bulb and film manufacturers. Blue bulbs are now recommended with all amateur films, both color and black-and-white. General Electric's new AG-3B

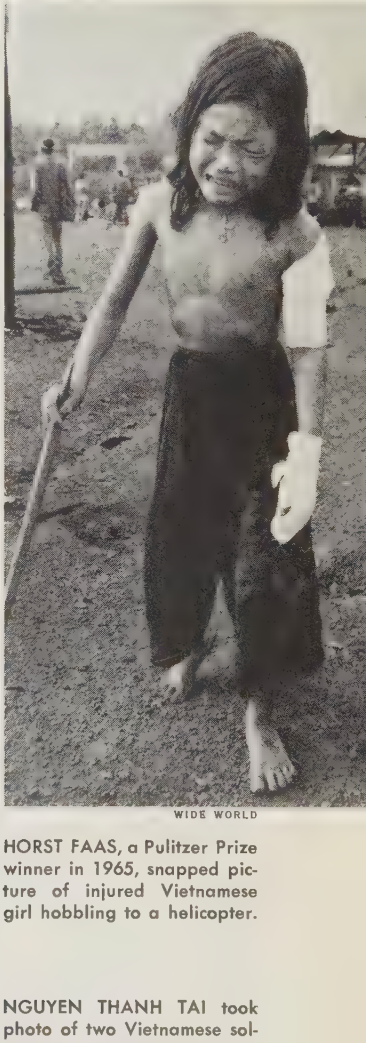


UPI

KYOICHI SAWADA, who won grand prize in World Press Photo Contest, took this picture of two U.S. soldiers helping comrade who was wounded in ambush in Vietnam on November 17.

WAR NEWS PHOTOGRAPHY FROM VIETNAM

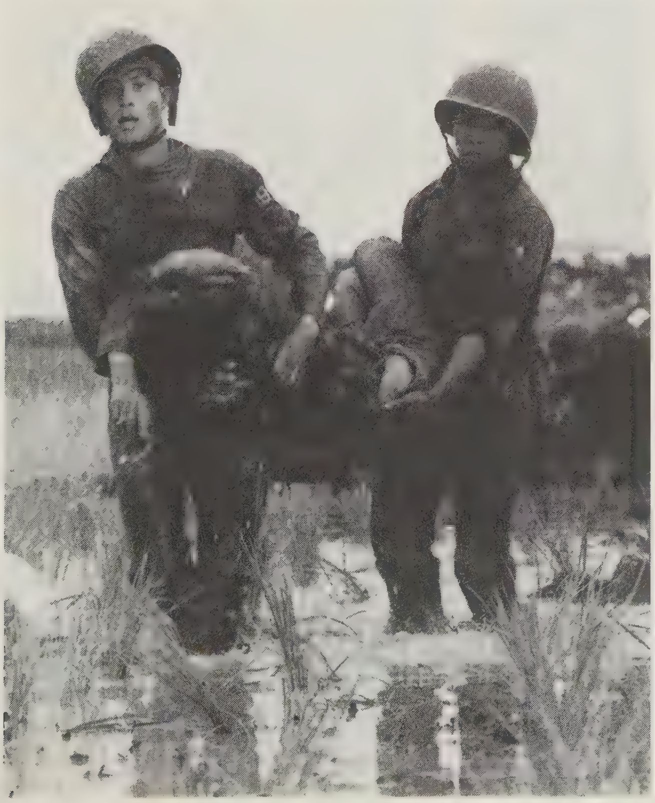
The war in Vietnam is being photographed by a group of courageous men who daily risk their lives to capture on film the horrifying reality of battle. On this page are shown examples of the work of three outstanding photographers—men whose artistry and sense of drama record the cruelty and pathos of the "dirty war" in Southeast Asia.



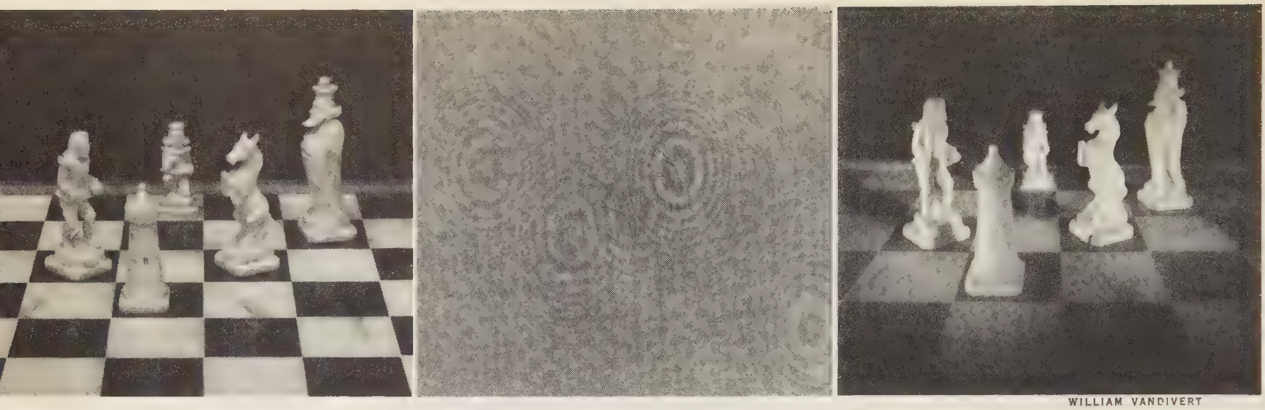
WIDE WORLD

HORST FAAS, a Pulitzer Prize winner in 1965, snapped picture of injured Vietnamese girl hobbling to a helicopter.

UPI



NGUYEN THANH TAI took photo of two Vietnamese soldiers carrying dead comrade out of rice paddy in Vietnam.



WILLIAM VANDIVERT

PHOTOGRAPH of chessmen (l.) was taken by using conventional camera and light to record 2-dimensional image on photographic film. Hologram (c.), a photographic film record of chess scene, was made by using laser light. Image (r.), reconstructed by passing laser beam through hologram, appears as 3-dimensional scene.

bulb gives one third more light than the AG-1B, which has the same size.

The Sylvania Flashcube—four independent flash bulbs in individual reflectors set within the four sides of a plastic cube about one inch on a side—has sparked a considerable redesign of cameras, and it may change picturemaking habits. Cameras designed for the cubes have a rotating socket to grip the base of the cube and to make electrical contact. Cube rotation is linked to film transport in the new Kodak Instamatic cameras, and four pictures can be made in five seconds. General Electric also makes flashcubes, and Yashica makes a device to adapt flashcubes to cameras.

The Honeywell Auto-Strobonar electronic flashgun eliminates the need for computing lens apertures from flash exposure guide numbers. After film speed and lens aperture have been set on a dial, a photocell in the gun housing responds to light reflected from the subject and electrically quenches the flash at the proper moment. Flash durations of 1/50,000 to 1/1000 second are obtained, depending on the nature and distance of the subject.

Single-ended quartz-bromine (halogen cycle) lamps can be used with a focusing device to provide spotlight or floodlight, as in the GE Mardi Gras Movie Light.

Processing. Stabilization processing of photographic papers is used when rapid delivery is necessary and long-term storage is not essential. Ilford's new Ilfoprint System includes a stabilization processing machine, chemicals, and high- and low-contrast papers of projection and contact speeds. The Kodak "Q" System is a two-bath stabilization system for the rapid production of intermediate prints of engineering drawings. If permanent images are desired, the stabilized papers may be fixed and washed in the usual manner. The system includes processor, chemicals, and papers. Stabilization processing is also used in the Minolta Quick-mat Printer—a countertop black-and-white print maker for photo shops—that automatically produces 3-by-4¼-inch prints from 16-mm to 35-mm negatives in 20 seconds. The printer is equipped with push buttons that control exposure and contrast. Coin-operated models are available.

The Kodak Versamat Film Processor Model 5 is a compact device that processes and dries sheet films (up to sizes of 5 by 7 inches) and roll films (from 16 mm to 5 inches wide and up to 200 feet long) at rates up to 10 feet per minute.

Minicol II Developer Concentrate (Edwal Scientific Products), diluted seven times, develops slow, fine-grain films.

Holography. An interesting use of laser light for making photographs recently has been demonstrated. Photographic film, exposed to the coherent laser light reflected from an object, records a pattern of wave fronts without the use of conventional image-forming devices, such as lenses, pinholes, and concave mirrors. The photographic record is called a hologram. The developed film shows only diffuse patches when viewed under ordinary conditions, but when it is properly viewed by coherent light from a laser, the original scene reappears in three dimensions. One may even look around objects in the reconstructed image by shifting one's viewpoint. A further interesting feature is that any part of the film, such as a small piece snipped from the corner, side, or center, is capable of reconstructing the entire original scene when laser light is passed through the film.

Literature. Several books published in 1965 on the art, science, and history of photography are of particular note. *Xerography and Related Processes*, by J.H. Dessauer and H.E. Clark (Focal Press), covers the theory and practice of xerography. Chester Carlson, the inventor of xerography, contributed a chapter on the history of electrostatic image recording. *Electrophotography*, by R.M. Schaffert (Focal Press), is also of note. *Light Sensitive Systems: Chemistry and Application of Non-Silver Halide Photographic Processes*, by Jaromir Kosar (Wiley), and *Photographic Gelatin*, by R.J. Croome and F.G. Clegg (Focal Press), are other significant additions to the scientific literature on photographic processes.

NASA published several series of photographs of the moon taken by the Ranger 7 cameras (Government Printing Office).

Edward Weston: Photographer, an Aperture Monograph edited by Nancy Newhall, contains many of his photographs. *Antique and Classic Cameras*, by Harry I. Gross (Chilton), describes apparatus that was significant in the history and development of photography.

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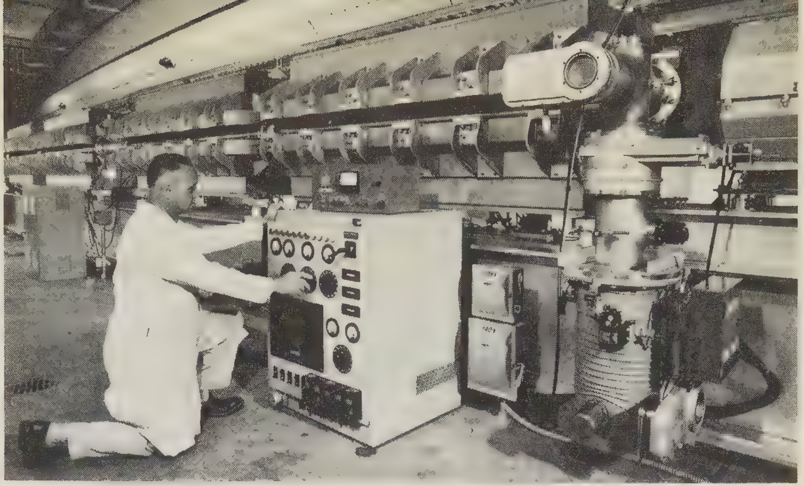

THE ANTIDEUTERON, an elementary particle, was discovered after protons had left the alternating gradient synchrotron (high energy particle accelerator) at Brookhaven National Laboratory. The giant circular synchrotron magnet ring accelerates protons in a near vacuum. The technician is adjusting controls of the evaporation pump, at right, which maintains vacuum.

BROOKHAVEN NATIONAL LABORATORY

PHYSICS

Although 1965 was largely another year of consolidation and fence-mending in most areas of physics, there were two notable developments: the discovery of the antideuteron, and experiments which cast doubt on the validity of time-reversal invariance.

Antideuteron. Elementary particle physics continues to be one of the most exciting and rapidly changing areas of physics. The antideuteron was observed by a team of physicists working with the Brookhaven National Laboratory's alternating-gradient synchrotron (high-energy particle accelerator).

In the general scheme of things, physicists believe that every particle has its antiparticle. Thus, every neutron has an antineutron; every proton, an antiproton; and every electron, an antielectron, or positron. Positrons, for instance, are not inherently unstable. Instead, their antiparticles, electrons, exist in abundance, and positrons and electrons are mutually annihilative. The discovery of antiparticles has led to endless speculative possibilities about antimatter in bulk; for example, the possible existence of antiatoms, an antiearth, and even an antiuniverse.

While various antiparticles have been produced individually, no compound of antiparticles (or piece of antimatter) had been observed. However, using the 30-Bev proton beam from the Brookhaven synchrotron in conjunction with a maze of bending magnets, Cerenkov counters, and complex electronics, a group of physicists led by Leon M. Lederman observed the antideuteron, which is made up of the antineutron and antiproton of the heavy hydrogen atom. It now seems reasonable to expect to find antitritons, antialphas, and other composite particles of antimatter.

Time-Reversal Invariance. One of the basic rules of physics during the past decade has been the CPT (charge conjugation, parity, time reversal) conservation theorem. The CPT theorem states that the laws governing antimatter are the same as those governing matter, except that antimatter must be viewed as if in a mirror and timed with a clock that runs backward. Charge conjugation relates matter and antimatter. Parity relates a reaction to its mirror image; that is, the parity rule asserts that a particle has no intrinsic right- or left-handedness. Time-reversal invariance refers to the principle that the direction of the flow of time should have no effect on the validity of physical laws.

Originally it was believed that C, P, and T are all conserved. However, in early 1957 a theory advanced by T.D. Lee and C.N. Yang that parity is not always conserved for weak interactions was proved true. Particles do have a right- or left-handedness. At the same time, it was found that charge conjugation is also violated in weak interactions.

When it was found that C and P are not conserved, scientists wondered whether the product CP is conserved. If CP is not conserved, but CPT is (conservation of CPT is still generally assumed to be true), then T is not conserved. An experiment with the Brookhaven synchrotron was made in order to examine this question.

The experimenters, from Princeton University, studied the decay of the neutral K mesons, K^o_1 and K^o_2. Mesons are subatomic particles that act to bind together the protons and neutrons that form the nuclei of atoms. For CP to be conserved, K^o_1 should be able to decay into two pi mesons (pions), π^+ and π^-, but K^o_2 should not. However, in about 45 cases out of 22,700, K^o_2 did decay in this fashion.

Theoreticians sought to explain this phenomenon by something other than the violation of CP conservation. Independently and at almost the same time, two groups of physicists postulated that the results shown by the decay of the K^o_2 meson are caused by a fifth force in nature. An opposite effect on the K mesons and on their antiparticles by the new force would account for the results obtained. (To date, four forces of nature have been discovered: gravity, electromagnetism, and the two nuclear forces, strong interaction and weak interaction.)

The new theories also proposed a neat way of testing the existence of the "fifth force." The number of two-pion decays would be proportionate to the square of the energy of the K meson. An experiment to check this effect was performed at the CERN synchrotron in Switzerland. The experimental results confirmed the original Princeton work, but disagreed with the predictions of the "fifth-force" theories.

The situation seems more confusing than ever, since physicists find the denial of time-reversal invariance very difficult to accept. Active study and speculation in this area continues.

Neutrinos. High-energy (elementary particle) physicists have discovered many new particles, especially in the last decade. They are continuing their efforts to classify and understand these constituents of the "nuclear zoo." A major problem has been to define the meaning of the term "elementary." Of the hundred or so observed particles, many are not truly elementary particles. Instead, they are "resonances" or excited states based upon the elementary particles.

Of all of these particles, the most perplexing is the neutrino. The neutrino has no rest mass and no electrical charge. It interacts with matter so weakly that a neutrino can travel through a million miles of solid lead without hitting anything.

The existence of a new particle was suggested in 1931 by Wolfgang Pauli to explain away some difficulties in beta decay (spontaneous disintegration of an atomic nucleus by emitting an electron or positron). The energy of the observed particles was always less than predicted; the function of the new particle was to carry off the missing energy. Enrico Fermi later named this particle "the little neutral one," or neutrino.

The ordinary beta decay process actually produces antineutrinos. Antineutrinos interact with protons to produce neutrons and a positron. This reaction was used by F. Reines and C.L. Cowan to first prove experimentally the existence of the neutrino.

Later it was found that there were two kinds of neutrinos (and antineutrinos). The one associated with beta decay was called the electron-type neutrino. The other type arises from the decay of a pi-meson (pion) into a mu meson (muon) and a neutrino. This is called a muon-type neutrino.

The new area of interest may well be called neutrino astronomy. High-energy protons (from cosmic rays) strike air atoms in the upper atmosphere. Some pions are produced; these decay into muons and neutrinos. Most of the neutrinos go straight through the earth, but a few interact with nuclei in the rock and create muons. Studying these muons tells about the neutrinos, and this in turn yields information about the cosmic rays.

The practical problem is to differentiate between muons created in the upper atmosphere and those created in the earth. To shield against the muons created in the atmosphere, Reines performed experiments at the bottom of a two-mile-deep gold mine in South Africa. He used 36 tanks containing 4,400 gallons of mineral oil to catch the muons, and apparently succeeded in detecting seven neutrinos that had been produced naturally. Thus, in order to study the far reaches of space, physicists have gone into the depths of the earth.

Laser Photography. The development, improvement, and application of lasers is of major interest. Lasers possess great research possibilities, as well as many technological applications. One of the most exciting developments, especially to the nonspecialist, is the development of laser photography.

In the ordinary photographic process an illuminated three-dimensional scene is recorded as a two-dimensional image on a light-sensitive surface. There is an alternative, relatively new approach called wave-front reconstruction. In this process the reflected light waves themselves, rather than their image, are recorded. The record, called a hologram, is a mass of blobs and whorls, and bears no resemblance to the original object. All of the information is there, but in a rather complex code. Creating a recognizable image from the hologram is the reconstruction process. The waves, which are effectively captured and frozen in the original "photographic" process, are later released from the hologram. They proceed as if just created, and the observer sees the image as he would with two eyes rather than through a single lens as on a photographic print.

Holography is not new, but all efforts in the past have been severely limited by the lack of a suitable source of coherent light (light whose waves are all in phase). A laser is, of course, just such a source of coherent light.

The process involves no lenses, the object is illuminated by coherent light, and a beam of coherent light is sent directly to the photographic plate. The whorls observed on the plate are the interference patterns formed.

Hologram television and motion pictures would be almost the ultimate in realism. Practical difficulties abound in the present state of the art. The most important immediate results probably will be in research areas such as electron microscopy. However, it is hoped that laser photography soon will become more than just a laboratory technique.

200-Bev Accelerator. In 1965, almost every state showed great interest in being the location for the proposed 200-Bev accelerator (which is to cost several hundred million dollars) and the national high-energy physics laboratory which surely will grow up around the accelerator.

More than 100 proposals have been submitted to the Atomic Energy Commission. In late 1965 a panel of experts organized by the National Academy of Sciences was in the process of selecting the much smaller number of proposals to be given further consideration. The final site will be selected by the AEC.

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PLANTS. See Agriculture—*Agricultural Research;* Botany; Gardening and Horticulture.

PLASTICS

The plastics industry registered a 10% production increase in 1965. Leading materials were polyethylene, vinyl, and styrene plastics. The two major markets were construction (2.5 billion pounds) and packaging (1.5 billion pounds). Expanding use of plastics was recorded in the automobile, appliance, agricultural, machinery, and chemical plant equipment industries.

New materials, including Du Pont's ionomers and polyimides and General Electric's polyphenylene oxide, have a higher heat resistance for aerospace applications than products heretofore developed.

New uses were made of transparent plastics containing about 2% of photochromic compounds that darken in seconds on exposure to bright light, but as quickly return to normal when the light is removed. These plastics were first used commercially in sunglasses and visors.

The Skoda Works in Czechoslovakia produced 62-foot electric locomotives with 3,600-pound reinforced plastic bodies that were 3,000 pounds lighter

U.S. PRODUCTION OF PLASTICS, 1964–65

Material	1964[1]	1965[2]
	(Millions of pounds)	
Polyethylene	2,613	2,900
Vinyl resins (chloride, acetate, etc.)	2,067	2,200
Styrene resins (including copolymers)	1,728	1,975
Phenolic resins	833	900
Alkyd resins	594	650
Urea and melamine resins	570	575
Polyesters	317	400
Polypropylene	270	350
Coumarone-indene resins	354	350
Cellulose plastics	161	165
Epoxy resins	105	125
Miscellaneous resins	495	560
Total	10,107	11,150

[1] Source: U.S. Tariff Commission. [2] Estimate on basis of first six months.

MODERN PLASTICS MAGAZINE

PLASTIC LOCOMOTIVE BODIES are produced by the Skoda Works, Czechoslovakia, using glass-fiber polyester resin material. They are 1½ tons lighter and much less expensive than their new all-steel equivalents.

than their steel equivalent. The use of the glass-fiber polyester-resin material also resulted in cost reduction and a faster production rate.

Provisional regulations for constructing reinforced plastic yachts with hulls between 20 and 120 feet long were published in 1965 by Lloyd's of London.

Consumption of plastic pipe in the United States in 1965 was estimated at 200 million pounds. Cleveland became the first large U.S. city to approve plastic pipe for drain, waste, and vents in building construction.

The 1965-model automobiles averaged 35 pounds of plastics per car, up 15% over 1964. This figure was increased in 1966 models, in which padded instrument panels and windshields with thicker plastic interlayers became standard safety equipment. In related products, a one-quart pouch container for motor oil made of polyvinyl chloride film produced a savings of 1.4 cent per container over metal cans. The lubricant container market is estimated to use 1.5 billion quart containers per year.

GORDON M. KLINE
Technical Editor, "Modern Plastics"

PLAYER, Gary. See biographical sketch under SPORTS.

PLAYS. See THEATER.

POETRY. See AMERICAN LITERATURE; CANADIAN LITERATURE; ENGLISH LITERATURE; FRENCH LITERATURE; and articles on other national literatures.

POLAND

An election campaign, in which almost all the candidates were Communists or closely affiliated with them, dominated the news from Poland in the first half of 1965. Since they were given no choice, the voters reconfirmed the Communist regime in power. Abroad, Poland sought closer economic ties with the Common Market countries and with Britain in order to bolster an economy that offered very little to the Polish consumer.

Elections. In early 1965 a vigorous government campaign was waged in preparation for the quadrennial parliamentary elections held on May 30. Although voters were not allowed to ballot for any genuine opposition parties, in some areas they could express a preference among several Communist-approved candidates. The government also tried to produce a high voter turnout as a sign of popular confidence in the regime.

It was reported that 96.6% of the qualified citizens cast ballots, as compared with 94.8% in 1961. The leader of the Communist party, Władysław Gomulka, headed the list in his own electoral district in Warsaw. In Kraków, however, Premier Józef Cyrankiewicz finished last among eight candidates.

The officially announced election figures showed virtually no change from the outcome of 1961. Of

POLAND · Information Highlights

EUROPE
ASIA
AFRICA

Area: 120,359 square miles.
Population: 31,420,000 (Mar. 31, 1965 est.).
Chief Cities (1964 est.): Warsaw, the capital, 1,232,000; Łódź, 737,000; Kraków, 509,000; Wrocław, 466,000.
Government: President, Council of State—Edward Ochab; *Premier*—Józef Cyrankiewicz; Communist Party First Secretary—Władysław Gomułka. *Parliament* (Sejm), 460 members; party seating (1965)—Communist Party (PZPR), 255; Populists (ZSL), 117; Democrats (SD), 39; others, 49.
Religious Faiths: Roman Catholics, 96.5% of population.
Education: *Literacy rate* (1960)—95% of population aged 14 and over. *Total school enrollment* (1962–63)—6,490,779 (primary, 5,117,319; secondary, 339,403; teacher-training, 109,906; vocational, 879,151; university, 45,000).
Finance (1965 est.): *Revenues,* $72,980,000,000; *expenditures,* $72,322,000,000; *monetary unit,* zloty (4.00 zlotys equal U.S.$1).
Net Material Product (1964): $124,075,000,000.
Economic Indexes (1964): *Industrial production,* 169 (1958=100); *agricultural production,* 152 (1949=100); *cost of living,* 108 (1958=100).
Manufacturing (metric tons, 1964): Cement, 8,761,000; crude steel, 8,568,000; wheat flour, 1,824,000; meat (1963), 1,571,000; sugar, 1,794,000; gasoline (1963), 285,000; cotton yarn, 178,800.
Crops (metric tons, 1964): Potatoes, 48,065,000 (ranks 2nd among world producers); sugar beets, 12,451,000 (world rank, 5th); rye, 6,956,000 (world rank, 2nd); wheat, 3,068,000 (world rank, 16th); oats, 2,236,000 (world rank, 6th); barley, 1,268,000 (world rank, 13th); tomatoes (1963), 295,000; onions (1963), 272,000.
Minerals (metric tons, 1964): Coal (1963), 113,150,000 (ranks 6th among world producers); salt, 2,242,000 (world rank, 10th); gypsum, 585,000 (world rank, 15th); zinc, 151,199 (world rank, 8th); iron ore, 2,680,000; sulfur, 294,000; crude petroleum, 2,092,000 barrels.
Foreign Trade (1964): *Exports,* $2,096,000,000 (chief exports, 1963: coal, $207,200,000; rolled steel, $129,300,000; ships and boats, $90,100,000; coke, $59,300,000); *imports,* $2,072,000,000 (chief imports, 1963: wheat, $101,300,000; petroleum products, $98,100,000; iron ore, $97,800,000). *Chief trading partners* (1963): USSR (took 35% of exports, supplied 33% of imports); East Germany (took 7% of exports, supplied 13% of imports); Czechoslovakia (took 8% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 196,520 miles (35,470 paved); *motor vehicles* (1964), 369,378 (automobiles, 188,192); *railways* (1963), 16,947 miles; *merchant vessels* (1964), 164 (876,000 gross registered tons); *national airline* (1964), Polish State Air Service (LOT); *principal airport,* Warsaw.
Communications: *Telephones* (1964): 1,088,686; *television stations* (1964), 35; *television sets* (1964), 1,500,000; *radios* (1963), 5,701,000; *newspapers* (1963), 41 (daily circulation, 4,490,000).

460 seats in the Diet (Sejm), 255 belong to the ruling Communist party (PZPR), with the two front or affiliate parties, the Populists (ZSL) and Democrats (SD) receiving 117 and 39 seats, respectively. There are also 49 so-called independents in the Sejm, of whom 13 have Roman Catholic lay affiliations.

Church-State Relations. An important theme of the campaign was Gomułka's open appeal for the support of the Roman Catholic laity. This appeal, however, followed a number of bitter exchanges on church-state issues between the government and the primate of Poland, Stefan Cardinal Wyszyński. In February and again in April, the cardinal accused the regime of repressing religious worship and education, and of enslaving the citizenry.

Communist Party Politics. A significant development in the internal politics of the party was the transfer of the crack internal security troops from the jurisdiction of the Ministry of the Interior to the Ministry of Defense. As the Interior Ministry is headed by the politically ambitious General Moczar, leader of the so-called partisan group within the party, the move was widely regarded as one that strengthened Gomułka's moderate leadership.

Defections. Unrest and disillusionment at home seemed to find expression in a number of Polish defections to the West. The most publicized defections included those of the head of the Polish military mission in West Berlin, Władysław Tykocimski, in May; and of the Polish consul general in Stockholm, Edmund Michalski, in September.

Economy. On the economic front, Poland made some notable advances in her foreign trade; exports increased by 18.4% in 1964 over the previous disastrous year. But overall economic development was uneven because industrialization was favored over other sectors in the economy. The output of manufactured goods increased substantially, whereas agricultural output remained stagnant. The sorry plight of the consumer went unheeded for still another year.

Foreign Affairs. In 1965, Poland enjoyed an increasing number of diplomatic contacts with countries anxious to woo her politically and economically. In January, bilateral talks were held with the Soviet Union on the coordination of Polish and Soviet economic planning up to 1970. In April a Soviet delegation headed by Soviet leaders Leonid Brezhnev and Aleksei Kosygin visited Warsaw and pledged support of the Oder-Neisse line as Poland's western frontier.

At the end of March, Poland became the first eastern European nation to send an official delegation to Brussels for exploratory technical discussions with Common Market representatives. In September, Premier Cyrankiewicz made an unprecedented trip to Paris. He visited President de Gaulle and explored the latter's bid for closer relations between France and the countries of eastern Europe. In the latter part of September, Poland was visited by British Foreign Secretary Michael Stewart. Expanded trade, denuclearization of Europe, and an eventual German settlement were prominent themes in their talks. However, Poland's attempts to win British support for recognizing the Oder-Neisse frontier with Germany appeared to have failed.

While Poland seemed to improve her international position generally, relations with the United States worsened perceptibly. In connection with the war in Vietnam, the Polish government chose to echo the more belligerent tones of Soviet propaganda. Symptomatic of the new trend were the expulsion in January of the American air attaché, Col. George F. Carey, and the bitter denunciation of American policy by Gomułka in his May Day speech in Warsaw.

From Dec. 30, 1965, to Jan. 1, 1966, U.S. Ambassador at Large W. Averell Harriman held talks in Warsaw with Polish officials on how a cease-fire might be achieved in the war in Vietnam.

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POLAR REGIONS. See ANTARCTICA; ARCTIC REGIONS.

POLICE

The trend toward statewide police selection and training standards gained momentum during 1965. Florida and Ohio considered legislation setting minimum standards for police officers. California, New Jersey, and Oregon, passed legislation prescribing minimum selection and training standards. New York already had passed laws making it mandatory for a police applicant to complete a prescribed basic training course before entering police service.

The Metropolitan Police Department, Washington, D.C., adopted the cadet system as a recruiting device. Under this system, men are appointed to the force on graduation from high school, usually at age 18. After three years of on-the-job training, they take the competitive examination for regular appointment to the force as a police officer. This system of recruitment has worked successfully in departments in several cities and states.

The technological capability of electronic data processing for storing volumes of data and recalling required facts quickly has far-reaching implications for the American police field. In 1965, the states of California and Illinois began to explore the possibilities of establishing a central facility for the electronic data processing of criminal records and information.

Legislation designed to prohibit the use of lie detector tests as a condition of employment were introduced in the legislatures of New York, California, Illinois, Washington, and other states. Police leaders generally were skeptical of these attempts to discredit the polygraph and associated techniques.

The 72nd Annual Conference of the International Association of Chiefs of Police was held Oct. 2–7, 1965, at Miami Beach, Fla. Two pertinent topics on the agenda were the control and prevention of civil rights disturbances and the promotion of an efficient traffic stream on streets and highways.

More than 130 police executives met at the University of Oklahoma to discuss the law enforcement implications of the Civil Rights Act of 1964.

The United Nations invited 120 countries to participate in the Third Congress on the Prevention of Crime and the Treatment of Offenders, held at Stockholm, Sweden, Aug. 9–18, 1965. The delegates discussed two major themes: the prevention of criminal acts by young offenders, and the prevention of further offences by first offenders.

A study analyzing police philosophy, policy, and opinion, entitled *Juvenile Delinquency and Youth Crime: The Police Role*, was released by the International Association of Chiefs of Police in 1965.

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DEMOCRATIC congressional leaders in 1965 included (l. to r.) Vice President Hubert Humphrey; John McCormack, speaker of the House; Mike Mansfield, Senate majority leader; Carl Albert, House majority leader; and Hale Boggs, party whip.

WIDE WORLD

POLITICAL PARTIES

Officeholders of the Democratic party, under the skillful leadership of President Lyndon B. Johnson and with widespread public support, continued in 1965 to dominate American national politics. The president pressed for legislation aimed at helping to build his Great Society. He sought also to win a popular consensus for his policies. His sense of political timing, pressure, and accommodation, coupled with overwhelming majorities in Congress, brought a record of legislative accomplishment rarely matched in a single session.

But the president encountered some disaffection. Conservative Democrats, mostly in the South, opposed federal activity in the racial and welfare areas, while some liberal Democrats asserted that such programs were not sweeping enough. And there were Democrats, including Senator J. William Fulbright, chairman of the Committee on Foreign Relations, who criticized the administration's foreign policies. Scattered local elections on November 2 revealed that liberal Republicans could draw enough support even in big-city Democratic strongholds to defeat lackluster Democratic candidates.

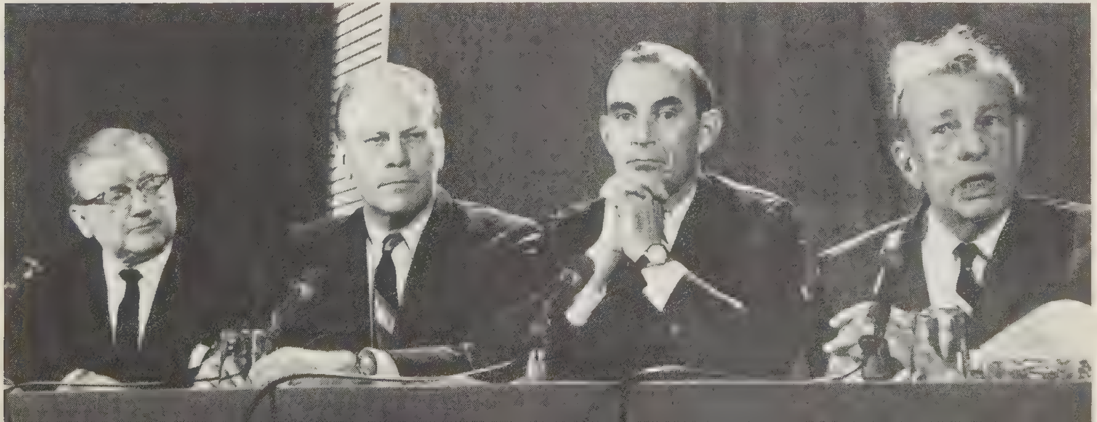
Congress. When the 89th Congress convened on Jan. 4, 1965, Democrats outnumbered Republicans in the House 295 to 140 and in the Senate 68 to 32—the largest margins for either party since 1936. The House again chose John W. McCormack (D, Mass.) as its speaker, and the Senate reelected Carl Hayden (D, Ariz.) president *pro tempore*. Republicans, by a vote of 73 to 67, elected Gerald R. Ford of Michigan to replace Charles A. Halleck of Indiana as minority leader. Melvin R. Laird of Wisconsin was elected chairman of the House Republican conference. Democrats continued Carl Albert of Oklahoma as majority leader. In the Senate, Mike Mansfield (D, Mont.) and Everett M. Dirksen (R, Ill.) were again chosen party floor leaders. Democrats elected Russell B. Long of Louisiana as party whip (assistant leader) on the second ballot, 41–25, over John O. Pastore of Rhode Island. He replaced Hubert H. Humphrey, who had been elected vice president in 1964.

The net Democratic gain of 38 seats and the defeat in 1964 of a number of conservatives sharply reduced the effectiveness of a long-standing coalition of Republicans and Southern Democrats in the House. Administration Democrats and some liberal Republicans joined forces to reduce the power of the Rules Committee to delay legislation.

By a vote of 157 to 115 on Jan. 2, 1965, House Democrats stripped committee seniority from John Bell Williams of Mississippi and Albert W. Watson of South Carolina for having supported Barry Goldwater, Republican nominee for president, in 1964. Watson resigned from Congress, joined the Republican party, and was reelected on June 15. The Mississippi Freedom Democratic party, a civil rights group with predominantly Negro membership, challenged the seating of the Mississippi House delegation on the ground that Negro citizens had been denied voting rights. The delegation (4 D, 1 R)

REPUBLICAN leaders, on March 11, urge U.S. action to ensure Negro voting rights. They are (l. to r.) Ray Bliss, national chairman-elect; Gerald Ford, House minority leader; Dean Burch, outgoing chairman; and Everett Dirksen, Senate minority leader.

WIDE WORLD



WIDE WORLD

JOHN M. BAILEY, chairman of the Democratic National Committee, "tended the store"—the national headquarters—in 1965, mindful that President Johnson was the party leader. Noting Republican gains in the South in 1964, Bailey warned that "the day of the one-party South is over." He set up a unit to help 71 freshmen Democratic congressmen win reelection in 1966, when they could not run on Johnson's "coattails." Bailey sought to end racial discrimination in the selection of convention delegates, and to guarantee that national candidates would be listed in every state (Alabama did not do so in 1964).

Bailey was born in Hartford, Conn., on Nov. 23, 1904. He graduated from the Catholic University in 1926, and from the Harvard Law School in 1929. He served in judicial and Democratic party posts during the 1930's. Bailey won control of the Connecticut Democratic party in 1946, and was elected chairman of the Democratic State Commission. He supported John F. Kennedy for the presidency in 1960, and was elected national chairman on Jan. 21, 1961.

was seated by a House vote of 276 to 148.

The liberal record of Congress brought praise from friends of the administration and derisive cries of "rubber stamp" from some Republicans. Major new legislation consistent with Democratic platform pledges included medical aid to the aged financed through social security, the first general federal aid to elementary and secondary education, changes in the immigration law, and a voting rights bill. Senator Dirksen played a major role in shaping much of the legislation; his influence with the administration was a notable feature of the session. (See CONGRESS; UNITED STATES.)

Party Organization. The Democratic party's national organization, basking in the election victories of 1964, was controlled from the White House. While its fund raising and promotional activities prospered, Republicans faced a rebuilding task. After a struggle, Dean Burch, a Goldwater supporter, resigned as chairman of the Republican National Committee. Ray C. Bliss, the Republican chairman in Ohio who had built a reputation for organizational skill, was elected national chairman on January 22 and took office April 1. Thereafter Goldwater's role in the committee and in the party declined rapidly, although he remained active in politics. On June 17 he announced the organization of the Free Society Association, with headquarters in Washington, to support conservative principles. The next day, Bliss criticized splinter groups as "destructive of party unity," but he observed later that "we are going to find a way to live with them and work with them." By mid-November the Goldwater organization had 20,000 members, but the former senator insisted that it would help the Republican party. More serious problems arose from the ultraconservative John Birch Society, whose members tended to be loyal to the society rather than to the party, and whose influence, rarely extensive, was often divisive. By fall, all major Republican leaders had urged Republicans to avoid the Birch society.

Meanwhile a Republican Coordinating Committee, composed of party leaders, was established to study issues. In September it advocated stronger local civil rights action and vigorous effort to improve the international balance of payments. The Republicans, having no mandate for national responsibility and generally pledged to support the administration in international crises, found it difficult to develop new issues. Governor William W. Scranton (R, Pa.) said, on August 12, that the party "is not, for the most part, serving as an effective instrument of the two-party system."

Prospects. Democrats watched two contenders for future national leadership. Vice President Humphrey necessarily adhered to the wishes of the president, and worried some liberals by campaigning in New York and Philadelphia for nominees supported by political "bosses." Senator Robert F. Kennedy, (D, N.Y.) seemed at times to taunt the administration by his own association with more liberal causes.

Richard M. Nixon, former vice president and Republican presidential nominee in 1960, was considered the leader among potential Republican presidential candidates for 1968, but the 1966 elections could change the picture. Governor Nelson A. Rockefeller (R, N.Y.) announced on July 25 that he would not be a presidential candidate in 1968. Election as mayor of New York City threw Republican John V. Lindsay into the national limelight despite his disinclination to identify himself with partisanship in a normally Democratic city. (See ELECTIONS; NEW YORK CITY.)

A clear lesson of the 1965 elections is that voters in big cities will shift party allegiance to support moderate liberals, with fresh programs, who are free from the image of machine control.

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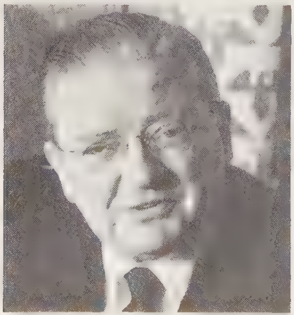
WIDE WORLD

RAY C. BLISS, elected chairman of the Republican National Committee on Jan. 22, 1965, took office on April 1. He had secured the support of the party's leading moderates and conservatives. Sniping between the party factions troubled Bliss, who sought to avoid ideological controversy by asserting that he was a "technician" concerned with winning elections. He urged the party to reject extremists of the right and left. Bliss, a man of dawn-to-dusk energy, was praised for streamlining operations at the national headquarters.

Bliss was born in Akron, Ohio, on Dec. 16, 1907. He graduated from the University of Akron in 1935. Entering politics as a campaign worker, he was active in Summit County politics for many years, winning recognition for his painstaking attention to the details of political organization. Elected state chairman in 1949, he led the Republican party to a number of victories. The party suffered a noteworthy defeat in 1958 when it ignored Bliss's warning to leave a right-to-work proposal off the ballot.

POLLUTION

LITTON INDUSTRIES

AIR POLLUTION, an increasing problem in many of the world's commercial centers, is dramatically illustrated by this view of low-lying smog in New York City.

POLLUTION

The overshadowing event of 1965 for opponents of water pollution was the signing into law of the Water Quality Act by President Johnson. The changes in water-quality management envisioned as a result of the act are so sweeping that President Johnson told a group of congressmen: "I believe that with your help and your continued cooperation, water pollution is doomed in this century." Furthermore, industries showed a maturing sense of responsibility for their role in the pollution problem.

Water Pollution. The Water Quality Act establishes a Federal Water Pollution Administration, provides grants for research and development, increases grants for construction of municipal sewage treatment works, and authorizes the establishment of standards of water quality to aid in preventing, controlling, and abating the pollution of interstate waters.

Presidential Message. President Johnson said at the signing on October 2:

> Today, we proclaim our refusal to be strangled by the wastes of civilization. Today, we begin to be masters of our environment. But we must act, and act swiftly. The hour is late, the damage is large. The clear, fresh waters that were our national heritage have become dumping grounds for garbage and filth. They poison our fish, they breed disease, they despoil our landscapes.
>
> No one has a right to use America's rivers and America's waterways, that belong to all the people, as a sewer. The banks of a river may belong to one man or one industry, or one state, but the waters which flow between those banks should belong to all the people.
>
> There is no excuse for a river flowing red with blood from slaughter houses. There is no excuse for paper mills pouring tons of sulfuric acid into the lakes and the streams of the people of this country. There is no excuse—and we should call a spade a spade—for chemical companies and oil refineries using our major rivers as pipelines for toxic wastes. There is no excuse for communities to use other people's rivers as a dump for their raw sewage. This sort of carelessness and selfishness simply ought to be stopped; and more, it just must be reversed. And we are going to reverse it.

Federal Program. Congress authorized $150 million annually for the construction of waste-water works. It limited federal payments to 30% of a contract price, but not more than $1.2 million for any single contract, except metropolitan or regional works, which may receive grants up to $4.8 million. Funds also may be provided to match state contributions. In addition, $20 million was appropriated for each of the next four fiscal years to demonstrate new and improved methods of controlling the discharge of storm water (waste waters other than sewage) and overflows from combined storm-water and sanitary sewers into rivers, lakes, and tidal estuaries.

Combined Systems. The demonstration grants followed a preliminary appraisal by the Public Health Service of the pollutional effects of storm water and of overflows from combined storm-water and sanitary sewer systems. According to the Public Health Service, 59 million people—about half of the U.S. population served by sewers—live in 1,900 communities that fail to maintain entirely separate sewer systems to keep sanitary sewage apart from the cleaner storm water.

Historically, combined systems emerged during the Industrial Revolution of the early 19th century when people began to cluster near factories, and storm drains were pressed into service to carry away human body wastes from habitations. Up to that time, these and other waste substances had been removed at night for use as fertilizer. Conversion of existing storm drains into combined sewers was, in essence, a crash program. Later in the 19th century, however, combined sewers were built as such in expanding urban complexes. It was recognized belatedly that this practice resulted in vicious pollution of the water courses into which the combined flows were emptied. Sewers, called intercepters, were then built to intercept the most grossly polluted waste waters of cities. These dry-weather flows were carried to points of discharge below the cities or to treatment plants that normally emptied their effluents (liquid wastes) in the natural drainage channels of the region. Only rarely were effluents discharged onto the land for irrigation.

In the United States, studies of combined sewerage systems have shown that an average of 3 to 5% of all raw waste water (at least 65 billion gallons annually) continue to be discharged by overflow from combined sewers to water courses. Most of the resulting gross pollution can be prevented by substituting separate systems for combined systems. Public Health Service studies show that the bacterial contamination of water courses by overflows from combined systems is far above accepted standards, and that large amounts of putrescible organic matter enter the receiving waters at the same time. It has also been shown that the first flush of storm water by itself may carry much the same kind and quantity of pollutants into water courses. In separate systems, storm sewers collect runoff from rainfall and discharge it into nearby water courses, and sanitary sewers conduct the waste waters from household and industry to treatment plants or outfalls (outlets to a water course).

Leadership Change. The Water Quality Act of 1965 transfers administration of water pollution control from the surgeon general of the Public Health Service to the secretary of health, education, and welfare. The latter is empowered to add an assistant secretary and an administrator or commissioner to direct the program. To indicate the importance of the reorganization of the water pollution control program within the department, House and Senate conferees recommended that the new assistant secretary and the administrator "be individuals of the highest caliber with the finest possible background in the field of water pollution, so that this program can be accelerated."

WATER POLLUTION may be attributed in part to a higher standard of living. Detergents created this suds area, 300 feet long and 12 inches deep, in Lake Erie near Erie, Pa.

UPI

Water pollution studies were begun in 1912 at the federal level when Congress directed the Public Health Service to investigate "the diseases of man and conditions influencing the propagation and spread thereof, including sanitation and the pollution, either directly or indirectly, of the navigable streams and lakes." Soon thereafter, a survey of the Ohio River was started under epidemiologist Wade Hampton Frost. Engineers, chemists, and biologists initially were recruited for this task as civil servants, and later as members of the commissioned corps of the Public Health Service.

When the Water Quality Act of 1965 removed the control of water pollution from the commissioned corps of the Public Health Service, the Civil Service became the single channel for appointment to responsible positions in the administration of the water-quality program. Conceivably, the new administrators eventually will enter the related areas of air pollution and control of man's environment in general.

State Participation. The Water Quality Act enlists the cooperation of states in establishing water-quality criteria applicable to interstate waters. Quality standards are drafted to protect the public health and welfare, and to enhance the acceptability of water for the purposes it is to serve. If a state does not file a letter of intent to do so, the secretary of health, education, and welfare may in substance prepare and publish water-quality standards for interstate waters within that state. Both state and federal standards are to be developed in cooperation with water authorities and the industries affected.

The act also provides legal procedures to stop the discharge of matter that reduces the quality of interstate waters below the applicable standard. Enforcement is to be pursued in three stages: conference, public hearings, and court action. According to a report by the House of Representatives, "the court is given jurisdiction to enter whatever judgment and orders the public interest and equities of the case may require after giving due consideration to the practicability and to the physical and economic feasibility of complying with the applicable standards." (See also WATER SUPPLY.)

Detergents and Other Chemicals. A promised switch from "hard" to "soft" detergents by the soap and glycerine industry was completed on time by mid-1965. Field tests demonstrated that the new soft synthetic detergents (linear alkylate sulfonate, or LAS) break down more rapidly during waste-water treatment or in the soil. This action eliminates the foam that had plagued sewage treatment plants and receiving streams, or had seeped into wells near houses. Within the waste waters, moreover, the soft detergents break down about as fast as other pollutants. The success of soft detergents led to hope for solving another problem: how to remove soluble phosphates from washing products, and from some soaps in hard-water regions of the country to reduce nuisance blooms of algae whose growth is stimulated by the phosphates. Researchers are also considering the possibility of the biological control of nuisance growths of algae by means of an algicidal virus.

The Public Health Service estimated that water pollution killed 18.4 million fish in 1964—about 10.5 million more than in 1963. Industrial wastes were held responsible for killing 12.7 million fish; municipal wastes, 4.1 million; and toxic substances from agricultural operations, 1.5 million. Pollution from transportation operations killed a relatively small number of fish.

Air Pollution. Recognizing that motor-vehicle exhaust is a major pollutant of urban air and that suitable control devices are available for gasoline-driven vehicles, Congress directed the secretary of health, education, and welfare to prescribe quality standards for the exhaust emission of new automobiles. No deadline was set in this 1965 amendment to the Clean Air Act of 1963, but it is understood that the 1968 models will have to meet quality standards. Before standards are set for control of exhaust from diesel engines, appropriate consideration is to be given to the technology and cost of control.

The Clean Air Act amendments also permit the department secretary to call conferences on air pollution abatement and to warn against specific interstate threats. The courts eventually may become involved in abatement proceedings. The secretary can be requested by a state to assist in intrastate problems. Also, pollution harmful to a neighboring country will become a responsibility of the Department of Health, Education, and Welfare if the United States is assured reciprocal treatment.

In California, the automobile industry began in the fall of 1965 to include exhaust-control devices on the new 1966 models. This action inspired New York, New Jersey, and other populous states to consider similar legislation.

Impetus had been given to the pollution-control campaign when Anthony J. Celebrezze, as secretary of health, education, and welfare, reported to Congress in December 1964:

> Photochemical air pollution or smog is a problem of growing national importance and is attributable largely to the operation of the motor vehicle. Manifestations of this type of air pollution are appearing with increasing frequency and severity in metropolitan areas throughout the United States. Biological studies of animals show that photochemical reaction products of automotive emissions produce adverse health effects. There is substantial evidence that these effects may appear in humans after extended exposure to air which is known to be polluted with these same products in many of the larger urban areas.

Solid Wastes Disposal. Both the land and air resources of urban complexes are being placed under stress by increasing amounts of solid wastes—rubbish, garbage, and demolition materials—that must be disposed of inoffensively and at reasonable cost. Recognizing the many-sided importance of this mounting municipal problem, Congress in 1965 authorized the expenditure of up to $82.5 million over the next four years for research, training projects, and surveys, and for demonstrations that cover the construction of new disposal works.

The urban waste program is to be administered by the Department of Health, Education, and Welfare; the solid wastes program of the mineral and fossil-fuel industries is the responsibility of the Department of the Interior. (See INDUSTRIAL HYGIENE.)

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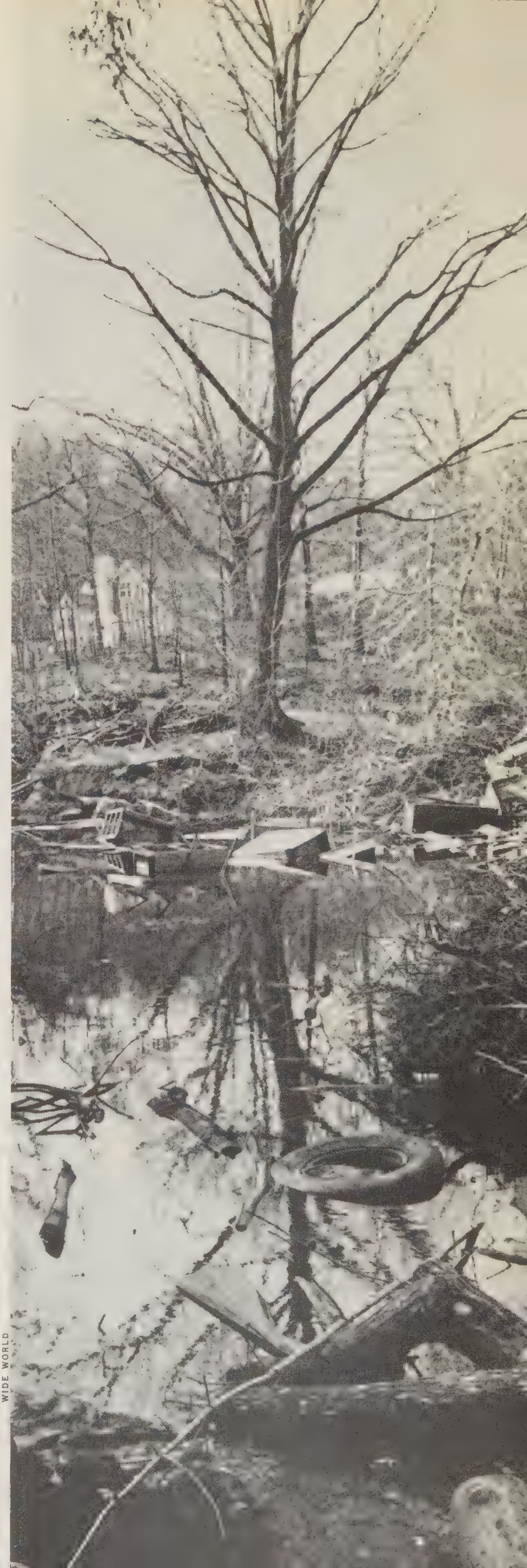
POLO. See SPORTS.



WIDE WORLD

CIVILIZATION'S DEBRIS contaminates a once-clean woodland pool in a rural part of Westchester County, N.Y.

POPULATION TRENDS

The world had an estimated population of 3.3 billion at mid-1965 and an annual rate of increase that approached 3% in many countries. These figures bore out predictions that the population of the world will almost double to 6 billion within the next 35 years.

In 1965 the population of the underdeveloped countries in Latin America and Africa continued to grow at a faster pace than those of the industrialized nations. The higher growth rate was the result of two causes: more advanced medical treatment that helped reduce the death rate, and a continuing high birthrate. (The annual birthrate in the underdeveloped countries is more than 40 per 1,000 persons, as against an average birthrate in industrialized countries of from 17 to 23 per 1,000.) It is expected that if the present growth rate continues in Latin America and Africa, their populations will triple within the next 35 years.

Most Populous Countries. Communist China remains the most populous country in the world. A United Nations estimate for 1964 placed its population at 660 million, while other estimates ran as high as 729 million. India ranked second, with 471 million, followed by the Soviet Union, with 229.1 million; the United States, with 194.8 million; Pakistan, with 100.8 million; and Japan, with 97.8 million.

Between 1959 and 1964, Hong Kong had the highest rate of population increase—5.8%. Other countries with high rates of increase were Costa Rica, with 4.6%, and the Ivory Coast, Sudan, and Venezuela, with 3.6% each.

U.S. Population Trends. In 1965, for the first time in 12 years, the number of births in the United States fell below 4 million for an estimated total of 3.8 million, as compared with the peak of 4,308,000 in 1957. If the current estimated birthrate of 19.5 per 1,000 persons continues, the population of the United States will reach 300 million by the year 2000, or one third more than the 1964 estimate.

Figures released during 1965 showed that California, with an estimated population of 18,602,000 (excluding servicemen), was the most populous state. New York ranked second with 18,073,000.

Nevada, one of the least populous states, has the highest annual growth rate—54.2% for the past 5 years. West Virginia was the only state to lose population—49,000 since 1960.

WORLD POPULATION ESTIMATES
(In millions, at midyear of years shown)

Region	1950	1960	1963	1964	Annual % increase 1950–63
World	2,509	2,990	3,160	3,220	2.0
Africa	207	273	296	304	3.2
North America[1]	218	199	281	285	2.0
South America	111	212	157	162	3.2
Asia[2]	1,384	1,651	1,802	1,855	2.4
Europe[3]	395	425	439	468	1.2
Oceania[4]	13	15.7	17.5	18	2.7
USSR	181	214	225	228	1.6

[1] Excluding Hawaii. [2] Excluding USSR, but including Asiatic Turkey. [3] Excluding USSR, but including European Turkey. [4] Including Hawaii. (Source: *Population and Vital Statistics Report*, October 1965, United Nations.)

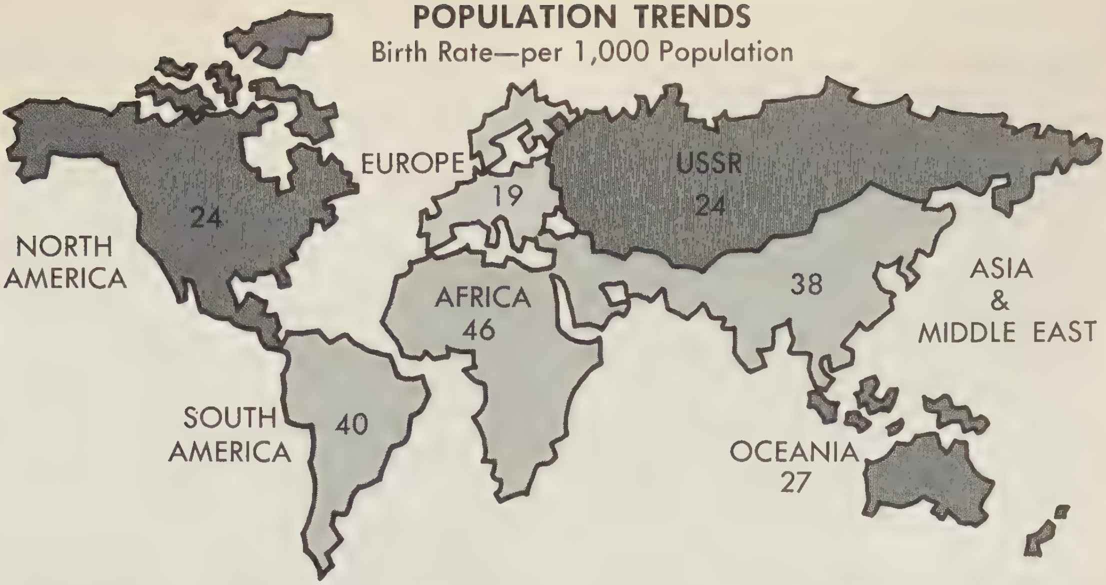
VITAL STATISTICS OF LEADING COUNTRIES

Crude birthrate—per 1,000 persons. *Crude death rate*—per 1,000 persons, excluding stillbirths. *Infant mortality rate*—deaths of infants under one year old per 1,000 live births, excluding stillbirths. *Annual increase*—average percentage increase of total population. *Life expectancy*—average expectation of life (in years) at birth. *Population per sq. mi.*—total area, including inland water. (Sources: United Nations Statistical Office, *Statistical Yearbook 1964* and *Population and Vital Statistics Report, October 1965*.)

	Estimated population (mid-1964)	Crude birth-rate	Crude death rate	Infant mortality rate	Annual % increase (1959–64)	Life Expectancy Male	Life Expectancy Female	Period	Pop. per sq. mi. (1964)
Africa									
Algeria	12,300,000	37.5	15.0	113.3	2	35.0[1]		(1948)	13.3
Congo (Léopoldville)	15,300,000	43	20	104	2	37.6[2]	40.0[2]	(1950–52)	16.7
Egypt	28,900,000	42.8	15.4	118.6	2.6	51.6	53.8	(1960)	74.8
Ghana	7,600,000	55.8	25.6	113.1	3.2[3]	38.0[2]		(1948)	82.5
Ivory Coast	3,750,000	56.1	33.3	...	3.6	35.0[2]		(1957–58)	22.0
Malagasy	6,180,000	42.4	16.5	76.3	3.4	...	...	...	26.8
Morocco	12,959,000	46.1	18.7	149	2.8	49.6		(1960)	75.0
Nigeria	56,400,000	55.0	...	...	0.12	...	...	...	158.4
South Africa	17,474,000	46	...	...	2.4	64.6[4]	70.1[4]	(1950–52)	32.8
Sudan	13,180,000	51.7	18.5	93.6	3.6	...	...	...	13.6
Tunisia	4,565,000	45.1	9.6	74.3	2.8	...	...	...	94.2
Asia									
Cambodia	6,200,000	41.4	19.7	127	5.4	42.2	43.3	(1958–59)	88.7
Ceylon	10,965,000	32.6	8.7	52.8	2.4	60.3	59.4	(1954)	432.8
China, Communist	686,000,000	34	11	...	...	...	...	...	185.5
China, Nationalist	12,070,000	34.5	5.7	26.4	3.4	61.3	65.6	(1959–60)	869.2
Hong Kong	3,692,000	29.4	4.9	26.4	5.8	63.6	70.5	(1961)	9,276.3
India	471,624,000	20.3	8.6	77.6	2.4	41.8	40.5	(1951–60)	400.9
Indonesia	102,200,000	27.7	10.2	81.7	2.5	...	...	...	138.9
Iraq	7,004,000	21.7	3.9	21.2	1.6	...	...	...	40.4
Israel	2,476,000	25.7	6.3	28.2	4.0	70.8[5]	73.0[5]	(1963)	309.8
Japan	96,906,000	17.7	6.9	20.4	0.8	67.2	72.3	(1963)	679.0
Jordan	1,898,000	45.5	6.0	48.4	3.4	...	...	...	50.3
Korea, South	27,633,000	44.7	15.9	...	3.0	51.1	53.7	(1955–60)	700.8
Malaysia	9,137,000	33.3	6.6	58.0	2.8	55.8[6]	58.2[6]	(1956–58)	71.1
Mongolia	1,050,000	39.2	11.2	...	3.0	...	...	...	1.7
Philippines	31,270,000	26.0	7.1	72.8	3.4	48.8	53.4	(1946–49)	270.2
Syria	5,399,000	26.2	4.3	26.3	3.6	...	...	...	75.7
Thailand	29,700,000	35.4	8.1	37.9	3.8	48.7	51.9	(1947–48)	149.6
Vietnam, South	15,715,000	21.9	4.8	35.7	2.6	...	...	...	238.2
North America									
Canada	19,237,000	23.5	7.6	24.7	2.4	68.3	74.1	(1960–62)	4.9
Costa Rica	1,387,000	40.8	8.8	86.4	4.6	54.7	57.1	(1949–51)	70.8
Dominican Republic	3,452,000	33.1	6.9	79.5	4.4	...	...	...	183.9
El Salvador	2,824,000	46.8	10.4	65.5	3.6	44.7	47.3	(1951–61)	341.8
Guatemala	4,304,000	47.7	17.2	92.8	3.4	43.8	43.5	(1949–51)	102.3
Honduras	2,092,000	46.3	9.6	47.0	3.4	...	...	...	48.3
Mexico	39,643,000	45.4	10.3	66.3	3.2	55.1	57.9	(1956)	52.1
Nicaragua	1,597,000	42.8	7.5	54.5	3.2	...	...	...	29.6
Panama	1,210,000	40.4	7.5	42.9	3.4	60.4	63.1	(1952–54)	41.4
Puerto Rico	2,584,000	30.2	7.1	51.3	2.2	67.1	71.8	(1959–61)	752.2
United States	192,119,000	21.2	9.4	24.2	1.4	66.6	73.4	(1963)	53.1

POPULATION TRENDS

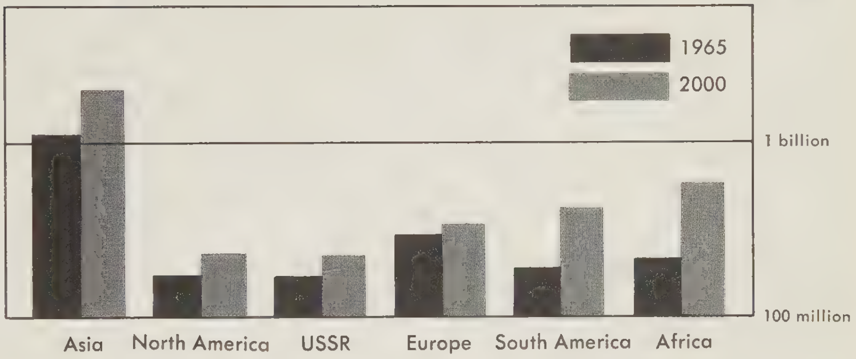
Birth Rate—per 1,000 Population



WORLD POPULATION 1965/2000

Total 1965: 3.3 Billion

Total 2000 (est.): 5.9 Billion



COURTESY OF THE NEW YORK TIMES

VITAL STATISTICS OF LEADING COUNTRIES (Cont.)

	Estimated population (mid-1964)	Crude birth-rate	Crude death rate	Infant mortality rate	Annual % increase (1959–64)	Life Expectancy Male	Life Expectancy Female	Period	Pop. per sq. mi. (1964)
South America									
Argentina	22,022,000	21.7	8.1	60.2	2.5[3]	56.9	61.4	(1947)	20.5
Bolivia	3,653,000	19.0	5.9	86.0	1.4	49.7	49.7	(1949–51)	8.6
Brazil	78,809,000	45.0	13.5	170.0	3.2	39.3	45.5	(1940–50)	23.9
Chile	8,492,000	33.7	12.0	111.0	2.6	49.8	53.9	(1952)	29.0
Colombia	15,434,000	43.7	11.4	83.3	2.2	44.2	46.0	(1950–52)	32.8
Ecuador	4,881,000	46.9	12.1	94.1	3.2	50.4[7]	53.7[7]	(1949–51)	46.7
Peru	11,357,000	27.7	8.3	94.8	2.2	46.1[8]		(1940–43)	22.8
Uruguay	2,682,000	22.5	7.8	47.4	...	...	...	...	37.1
Venezuela	8,427,000	43.4	7.2	47.9	3.6	45.8	47.6	(1941–42)	23.9
Europe and USSR									
Austria	7,215,000	18.6	12.3	29.2	0.4	65.0	71.0	(1960)	222.8
Belgium	9,378,000	17.2	12.1	27.2	0.6	62.0	67.3	(1946–49)	796.0
Britain[9]	47,401,000	18.5	11.3	20.0	0.8	68.0	73.9	(1961–63)	812.5
Bulgaria	8,144,000	16.1	7.9	32.9	0.8	64.2	67.7	(1956–57)	190.5
Czechoslovakia	14,058,000	17.1	9.6	21.2	0.6	67.2	72.8	(1962)	284.7
Denmark	4,720,000	17.6	9.9	18.7	0.6	70.4	73.8	(1956–60)	284.0
Finland	4,580,000	17.6	9.3	16.9	0.8	64.9	71.6	(1956–60)	35.1
France	48,417,000	18.1	10.7	23.4	1.4	67.2	74.1	(1963)	224.5
Germany, East	17,068,000	16.9	15.2	30.4	−0.2	67.3	72.2	(1960–61)	408.1
Germany, West	58,290,000	15.3	14.0	28.5	1.5	66.8	70.7	(1960–62)	607.6
Greece	8,510,000	18.1	8.2	35.6	0.6	67.4	70.7	(1960–62)	168.3
Hungary	10,120,000	13.1	10.0	39.8	0.2	65.2	69.6	(1959–60)	281.7
Iceland	189,000	25.1	6.9	17.7	1.8	70.7	75.0	(1951–60)	4.7
Ireland	2,849,000	22.5	11.4	26.8	0.02	64.5	67.1	(1950–52)	104.9
Italy	50,955,000	20.0	9.6	35.5	0.6	65.8	70.0	(1954–57)	438.1
Netherlands	12,127,000	20.7	7.7	14.8	1.2	71.4	74.7	(1956–60)	934.4
Norway	3,695,000	17.9	10.0	16.7	0.6	71.1	74.7	(1951–55)	29.5
Poland	31,161,000	18.1	7.6	47.7	1.2	64.8	70.5	(1960–61)	258.8
Portugal	9,107,000	23.7	10.2	73.1	0.6	60.7	66.3	(1959–62)	256.4
Rumania	18,927,000	15.2	8.1	48.6	0.6	61.5	65.0	(1956)	206.4
Scotland	5,206,000	20.0	11.7	24.0	−0.2	66.0	71.9	(1961–63)	174.7
Spain	31,339,000	22.2	8.7	37.9	0.8	67.3	71.9	(1960)	160.8
Sweden	7,695,000	16.0	10.0	14.2	0.6	71.3	75.3	(1962)	44.3
Switzerland	5,874,000	19.2	9.4	20.5	2.2	69.5	74.8	(1959–61)	366.1
USSR	227,687,000	19.6	6.9	29	1.6	65.0	73.0	(1960–61)	26.4
Yugoslavia	19,279,000	20.8	9.4	76.0	1.0	62.1	65.2	(1960–61)	195.1
Oceania									
Australia	11,136,000	20.6	9.0	19.1	2.0	67.1	72.8	(1953–55)	3.7
New Zealand	2,594,000	24.1	8.8	19.1	2.5	68.2	73.0	(1955–57)	25.0

[1] Muslims, both sexes. [2] Africans. [3] 1960–64. [4] White population. [5] Jewish. [6] Malaya only. [7] For Quito. [8] For Lima. [9] England and Wales.

PORTUGAL

Dr. António de Oliveira Salazar celebrated his 76th birthday and his 33rd anniversary as Portugal's premier in 1965. His control over the country remained absolute, and his candidates for the presidency and the National Assembly were automatically elected. His government suppressed all signs of opposition both at home and in Portugal's African territories, where guerrilla activities were kept in check. Portugal continued to jettison its traditional policies of economic caution and self-containment in order to raise the economy to the level of other European countries.

Elections. Two national elections took place in 1965, one for the presidency and one for the National Assembly. As the political opposition found it almost impossible to campaign under the conditions set by the government, there was general apathy in regard to both elections.

In the case of the presidential election, which took place on July 25, the vote was limited to an electoral college made up of government supporters in the national and provincial assemblies. The seven-year presidential term of Rear Admiral Américo Deus Rodrigues Tomás ended in June. Tomás was 70 years old, and it was felt in some circles that his age should preclude him from reelection, especially since Premier Salazar, the country's dictator, was 76. Certain military leaders favored a general who could direct the war against the guerrillas in Portugal's African territories.

In spite of this mild opposition to him, President Tomás was named the official candidate of the National Union, Salazar's political organization. No other candidate was offered the electoral college, and Tomás was reelected president by 556 votes out of a possible total of 585.

Following the presidential elections, Premier Salazar ordered a reorganization of the National Union, the only legal political organization in Portugal. He announced that he wished to revitalize it by bringing in new and younger leaders and to intensify the policy of indoctrinating the electorate. The immediate objective was to prepare for national legislative elections in November.

Though the political opposition announced that it would contest some of the seats, its 34 candidates were withdrawn several weeks before the election, when the government refused to permit the opposition to watch the polls on election day. Shortly before the election, a group of 100 Roman Catholic laymen published a manifesto declaring that Salazar's government had systematically offended Catholic values. They called for more political democracy and social reform. However, since the group was not organized politically, Salazar's nominees had no difficulty winning the election on November 7.

Domestic Unrest. A student demonstration occurred in Lisbon on February 2 to protest the trial of four college students charged with being Communists. On April 1, students demonstrated against the arrest of nine students. On July 10, the arrested students and a civil servant were convicted of having engaged in subversive activity on behalf of the Communist party. They were accused of belonging to the Front for Popular Action, the pro-Chinese faction of the Portuguese Communist party. Disciplinary action was also started against 208 students who had demonstrated on April 1.

Lt. Gen. Humberto Delgado, vigorous leader of the opposition in the 1958 presidential elections, disappeared in February while on a secret mission to Spain, reportedly to start an armed revolt in Portugal. A body identified as that of Delgado was found in April near Villanueva de Fresno in Spain, two miles from the Portuguese border. Delgado's friends and political associates accused the Portuguese government of involvement in the slaying, while the Portuguese authorities countered that it was the act of Communists. General Delgado had dedicated himself to the overthrow of Premier Salazar. He had been involved in the attack in 1962 on the Beja garrison and in the spectacular seizure of the Portuguese liner *Santa Maria* in 1961.

In May, the Salazar government dissolved the Portuguese Writers Association, which had awarded a literary prize to a man convicted in 1963 of ter-

PORTUGAL · Information Highlights

EUROPE
ASIA
AFRICA

Area: 35,510 square miles.
Population: 9,172,000 (July 1, 1965 est.).
Chief Cities (1960 census, de jure): Lisbon, the capital, 802,230; Pôrto (Oporto), 303,424; Coimbra, 46,313; Setúbal, 44,435.
Government: *President*—Rear Admiral Américo Deus Rodrigues Tomás; *Premier*—Dr. António de Oliveira Salazar. *Parliament*—National Assembly (130 seats).
Religious Faiths: Roman Catholics, 93% of population; others, 7%.
Education: *Literacy rate* (1960)—62% of population aged 15 and over. *Total school enrollment* (1962)—1,187,100 (primary, 886,519; secondary, 136,274; teacher-training, 4,455; technical, 132,528; higher, 27,324).
Finance (1965 est.): *Revenues*, $455,000,000; *expenditures*, $581,000,000; *monetary unit*, escudo (28.75 escudos equal U.S.$1).
Gross National Product (1964): $3,142,000,000.
National Income (1964): $2,757,000,000; average annual income per person, $303.
Economic Indexes: *Industrial production* (1963), 145 (1958=100); *agricultural production* (1964), 108 (1956–57=100); *cost of living* (1964), 115 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,622,000; wine, 1,118,000; wheat flour, 405,600; crude steel, 250,800; meat, 90,000; cotton yarn, 67,320; olive oil, 39,000; fuel briquets and packaged fuel, 38,000.
Crops (metric tons, 1964): Grapes, 1,551,000 (ranks 8th among world producers); citrus fruits, 172,000 (world rank, 19th); rye, 131,000 (world rank, 19th); potatoes, 1,078,000; maize, 479,000; wheat, 472,000; figs, 366,000; rice, 174,000; citrus fruits, 172,000; apples (1963), 92,000; oats, 81,000; dry beans, 58,000; pears (1963), 58,000.
Minerals (metric tons, 1964): Anthracite coal, 444,000 (ranks 15th among world producers); tin, 668 (world rank, 17th); pyrites, 608,000; salt (1963), 347,000; iron ore, 172,000; manganese, 6,883; silver, 48,775 troy ounces.
Foreign Trade (1964): *Exports*, $515,000,000 (chief exports: cork, $57,800,000; fish, $40,800,000; wine, $37,200,000); *imports*, $761,000,000 (chief imports, 1963: nonelectrical machinery, $85,000,000; raw cotton, $46,000,000; motor vehicles, $42,000,000). *Chief trading partners* (1963): Britain (took 14% of exports, supplied 14% of imports); West Germany (took 8% of exports, supplied 15% of imports); U.S. (took 12% of exports, supplied 9% of imports).
Transportation: *National roads* (1964), 10,952 miles (8,334 paved); *motor vehicles* (1964), 249,554 (automobiles, 222,193); *railways* (1963), 2,240 miles; *merchant vessels* (1964), 89 (556,000 gross registered tons); *principal airport*, Lisbon.
Communications: *Telephones* (1964): 485,177; *television stations* (1964), 4; *television sets* (1964), 150,000; *radios* (1963), 1,068,000; *newspapers* (1963), 29 (daily circulation, 577,000).

rorism in Angola, José Vieira Mateus de Graça. Vieira had written his novel under the pseudonym of Luandino Vieira. The writers association, which included most of Portugal's prominent authors and journalists, declared that the prize had been awarded for the literary value of the work and that no judgment had been made on the political activities of the writer.

By July the government's action against the writers had spread to the publishers, under the stimulation of the Salazar and conservative Roman Catholic press. Political police checked the contents of some 23 books of Portuguese and foreign writers to ascertain whether they had Communist or other subversive connections.

African Territories. At the beginning of 1965 a spirit of optimism prevailed concerning the future of the Portuguese provinces in Africa. Few disorders were reported, and economic progress had been made. The guerrilla and terrorist bands in northern Angola and in Portuguese Guinea and Mozambique appeared to have been contained.

Portuguese casualties were light in the antiguerrilla actions in Africa. Between March 1961 and Jan. 1, 1965, only 433 Portuguese soldiers had been killed in combat in Angola. The Angolan nationalist groups appeared to be divided, and independent African countries were preoccupied with more pressing issues than their campaign against Portugal. The Portuguese government has undertaken a campaign to persuade Africans that they are better off in Portuguese territories than in neighboring independent countries. To bolster this campaign, educational and health facilities have been improved.

Considerable economic expansion was reported in Angola, and moderate progress was made in the other African possessions as both Portuguese and foreign capital began to return in 1964, after having taken flight during the Angolan crisis of 1961. At the beginning of 1965 the government inaugurated a three-year development plan which was to triple Portugal's investment in the territories. They form an important asset for Portugal that it does not intend to lose. Angola has begun to export petroleum and has become the third largest coffee producer in the world.

Foreign Affairs. In August, Foreign Minister Alberto Franco Nogueira announced that Portugal had invited Brazil to act jointly with it for "the guarantee and defense" of their respective countries, including Portuguese Africa. This proposal represented a modification of Portugal's former position regarding the territories. It had concluded a treaty of friendship and consultation with Brazil in 1954, but the treaty had not been fully implemented because Portugal had refused at that time to include the African territories in the agreement. The broader community proposed in 1965 would contain more than 100 million inhabitants and might play an important role in the South Atlantic area.

The Portuguese government closed the Chinese Nationalist consular agency in its colony of Macao on the southeast coast of China. Officially it did so because of the consulate's alleged illegal activities, but more probably because of Communist Chinese protests against Nationalist espionage activities there. Although resolutely anti-Communist in the conduct of its internal affairs, Portugal has tried to avoid trouble with Communist China, since Macao is a small enclave on the Chinese mainland and is at the mercy of Peking.

Economy. The Portuguese economy continued to be based on agriculture, forestry, and fishing, but the country's 1 million foreign visitors in 1964 made tourism an increasingly important source of income. Half of the active population is engaged in agriculture, which is handicapped by an unreliable climate, erosion, and the failure of farmers to adopt modern methods. Portugal is the foremost cork producer in the world and an important producer of naval stores. The current three-year development plan provides for the expenditure of 1.7 billion escudos in continental Portugal and substantial sums in Angola and Mozambique.

A sign of Portugal's economic progress is found in a monumental suspension bridge over the Tagus River. It will provide a vital link between the industrial northern part of Portugal and the backward south. To be completed in 1966, the bridge symbolizes the transition from a cautious, self-contained economic policy to the promotion of more daring and progressive enterprises. The government has been contracting foreign loans in England, Europe, and the United States to stimulate industry, private investments, and increased production. As a result of the brightening economic picture, new foreign corporations are being attracted to Portugal.

RHEA MARSH SMITH
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POST OFFICE

Lawrence Francis O'Brien was sworn in as postmaster general on Nov. 3, 1965, succeeding John A. Gronouski, who had resigned to become ambassador to Poland. In announcing O'Brien's appointment, President Johnson referred to his efforts as liaison man between the president and Congress in securing the enactment of social legislation: "I know of no single individual who has contributed more to the enactment of legislation that touches the lives of so many Americans." (For a biographical sketch of O'Brien, see UNITED STATES.)

ZIP Code. The Post Office continued its efforts to establish the use of ZIP Code numbers. On November 18, Postmaster General O'Brien announced that, effective Jan. 1, 1966, the ZIP Code number must be carried on all official federal mail.

Stamps. Seventeen special stamps were issued in 1965 to commemorate important events, movements, organizations, and individuals. Americans honored were John Singleton Copley, Robert Fulton, Herbert Hoover, and Adlai Stevenson, and stamps were also issued for Dante Alighieri and Winston Churchill. See STAMP COLLECTING.

Ruling on Post Office Procedures. On February 23 the Senate Judiciary Subcommittee on Administrative Practice and Procedure opened hearings on reported Post Office surveillance of first-class mail—the delivery of mail to an addressee unopened only after the information on the envelope has been checked for possible clues that might lead to the solving of crimes or detection of tax evasion. Senator Robert F. Kennedy denied that, when he was attorney general, he had authorized the submission of some first-class mail to supervisors for this purpose. Postmaster General Gronouski reported that his department had halted liens against mail deliveries to alleged tax delinquents.

On May 24 the Supreme Court held unconstitutional a federal law requiring persons to whom "Communist political propaganda" from abroad was addressed to make a special request to the Post Office to deliver it. It held that this was a violation of the 1st Amendment of the Constitution.

Finances, Offices, and Employees. The net revenue of the Post Office Department for the fiscal year 1964 (ending June 30, 1965) was $4.276 million.

As of June 21, 1965, there were 33,625 post offices in the United States and its possessions—4,439 first class, 6,836 second class, 12,889 third class, and 9,461 fourth class.

There were 534,505 full-time employees and 59, 370 part-time employees in the United States proper, and 1,622 employees in the territories. In October a 3.6% pay increase was granted to postal workers.

POVERTY. See ANTI-POVERTY PROGRAM.

POWER, Electric. See ELECTRICAL INDUSTRIES.

PRESBYTERIAN CHURCHES

In 1965 the Presbyterian churches in the United States included The United Presbyterian Church in the United States of America; Presbyterian Church in the United States; Reformed Presbyterian Church, Evangelical Synod; Reformed Presbyterian Church of North America; Associate Presbyterian Church of North America; Associate Reformed Presbyterian Church; Cumberland Presbyterian Church; Second Cumberland Presbyterian Church; and Orthodox Presbyterian Church.

The 177th General Assembly of The United Presbyterian Church in the U.S.A. met at Columbus, Ohio, May 20, 1965. Ruling Elder William P. Thompson of Wichita, Kans., was elected moderator. The capital-needs fund campaign for $50 million reported progress. Contributions for 1964 totaled $304,833,435, of which $57,900,012 was for benevolences.

The Cumberland Presbyterian Church and Second Cumberland (Negro) Church are studying a plan of union. The Orthodox Presbyterian Church reaffirmed commitment to the Westminster Confession of Faith and catechisms. In April 1965 the Reformed Presbyterian Church in North America, General Synod, merged with the Evangelical Presbyterian Church to form the Reformed Presbyterian Church, Evangelical Synod.

PRESBYTERIAN CHURCH STATISTICS

Church	Ministers	Churches	Members
Associate Presbyterian Church of North America	4	5	760
Associate Reformed Presbyterian Church	131	143	27,017
Cumberland Presbyterian Church	881	954	80,231
Orthodox Presbyterian Church	149	101	8,067
Presbyterian Church in the U.S.	4,082	4,007	940,634
Reformed Presbyterian Church, Evangelical Synod	228	110	10,000
Reformed Presbyterian Church of North America	98	68	4,537
Second Cumberland Presbyterian Church	120	147	10,000
United Presbyterian Church in the U.S.A.	12,618	9,100	3,302,839

The 105th General Assembly of the Presbyterian Church in the U.S. was held in Montreat, N.C., April 21 to 26. Ruling Elder Dr. Samuel J. Patterson, Jr., of Atlanta, Ga., was elected moderator. This church primarily serves the southeastern and southwestern areas of the United States. It is working with the Reformed Church in America on a plan of union. Its total contributions in 1964 amounted to $108,269,579, of which $26,341,356 was spent for benevolences.

SAMUEL W. SHANE
Associate Stated Clerk, General Assembly
The United Presbyterian Church in the U.S.A.

PRESIDENTIAL SUCCESSION

Scholars have argued for years over the meaning and the adequacy of the passage in the U.S. Constitution that provides for the transfer of executive authority when a president dies or is disabled. In 1965, Congress approved a constitutional amendment on presidential succession. It will become part of the Constitution if ratified by three fourths of the states within seven years.

The Constitution states: "In Case of the Removal of the President from Office, or of his Death, Resignation, or Inability to discharge the Powers and Duties of the said Office, the Same shall devolve on the Vice President. . . ." Does "the Same" refer to "the said Office" or only to "the Powers and Duties" of the office? When a president died, the vice president always assumed both the office and its powers and duties. But in instances of apparent presidential disability, each vice president declined to act, fearing that if he assumed both the office and its powers and duties the disabled president, should he recover, would have no constitutional means of reclaiming his office.

In January 1965, while hospitalized briefly with a chest cold, President Johnson called on Congress to resolve the succession problem. Senator Birch Bayh, Jr., of Indiana, who had tried in 1964 to secure approval of an amendment, brought forth a revised draft in 1965. Some senators wanted to handle the problem by statute, but others argued that a statute could be challenged in court, possibly

EXECUTIVE AUTHORITY, should President Johnson be incapacitated, would pass to Vice President Humphrey (l.).

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creating chaos. The amendment, further revised, was approved by the House by voice vote on June 30, and in the Senate by a vote of 68-5 on July 6.

The amendment does not say what physical or mental conditions constitute disability. It provides that the president may declare himself disabled, in which case the vice president discharges the powers and duties of the office as acting president until the president says he has recovered.

If the vice president believes the president to be disabled, and if the president fails to so declare himself, the vice president may become acting president on securing the support of a majority of the members of the cabinet "or of such other body as Congress may by law provide. . . ." Thereafter, the president might claim that he is able to serve. In the face of this claim, the vice president may try to retain control of the executive branch by appealing to Congress, which must convene within 48 hours. If Congress, within 21 days, decides by a two-thirds vote of both houses that the president is unable to discharge his duties, the vice president continues to serve as acting president; otherwise, the president resumes his office.

The amendment also provides that in the event of a president's death or removal, the vice president inherits the office, not just its powers and duties.

In the event of a vacancy in the vice presidency, the amendment authorizes the president to nominate a vice president, who must be confirmed by a majority vote of both houses of Congress.

On Oct. 8, 1965, President Johnson's gallbladder was removed. He was out of touch with his responsibilities for only a few hours. But only eight states had then ratified the amendment (17 by Feb. 3, 1966), and the requisite number, 38, cannot be secured before 1967, when most state legislatures meet.

Donald Young
Assistant Editor, Encyclopedia Americana
Author, "American Roulette: the History and Dilemma of the Vice Presidency"

PRICES. See Cost of Living.

PRINCE EDWARD ISLAND

Interest in 1965 centered on the building of a causeway between Prince Edward Island and the Canadian mainland that is expected to effect a marked improvement in the island's tourist trade.

Causeway. The federal government is financing the building of a nine-mile link between Prince Edward Island and New Brunswick on the mainland that will consist of three units: a causeway, a bridge, and a tunnel. The $148 million complex is scheduled for completion in 1970.

The first sod for the causeway approaches was turned in November 1965 at Cape Jourimain on New Brunswick. Construction of other units will begin in 1966. The three-mile tunnel section will permit the passage of ships and floating ice.

Politics. In the federal elections of November 8, the island returned Progressive Conservatives to all four of its seats in the federal Parliament at Ottawa. Previously the seats were divided evenly between Liberals and Progressive Conservatives.

Education. Prince of Wales College in Charlottetown, which since 1834 has been a junior college, was raised to the status of a full degree-granting university.

Festivals. The second of the island's summer festivals was held in the Confederation Center in Charlottetown. Festival '65 brought many of Canada's most eminent artists to Charlottetown. Exhibitions of art from all the other provinces also were presented.

— PRINCE EDWARD ISLAND · Information Highlights —

Area: 2,184 square miles.
Population: 108,000 (Oct. 1, 1965 est.).
Chief Cities (1961 census): Charlottetown, the capital (18,318); Summerside (8,611).
Government: *Chief Officers*—Lt. gov., W.J. MacDonald; premier, Walter R. Shaw (Conservative party); prov. secy., J.D. Stewart (PC); prov. treas., M.A. Farmer (PC); min. of educ., L.G. Dewar; chief justice, Thane A. Campbell. *Legislative Assembly* (convened Feb. 18, 1965)—30 members (17 Conservative, 11 Liberal, 2 vacant).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 28,022 pupils (1,208 teachers); private, 502 (25); college and university (1964–65), 802. *Public school expenditures,* $6,872,000; average teacher's salary, $3,180.
Public Finance (fiscal year 1965 est.): *Revenues,* $20,670,000 (sales tax, $7,080,000; income tax, $1,413,000; federal funds, $8,867,000). *Expenditures,* $23,560,000 (education, $4,960,000; health and welfare, $5,390,000; transport and communications, $6,490,000).
Personal Income (1964): $131,000,000; average annual income per person, $1,213.
Public Assistance (1965 est.), $1,970,000 (aged and blind, $1,020,000; dependents and unemployed, $530,000).
Labor Force (1961 census; agricultural and manufacturing only): *Agricultural,* 9,188; *manufacturing,* 1,695.
Manufacturing (1962): *Value added by manufacture,* $10,106,000 (including transportation equipment, $215,000, and food and kindred products, $7,067,000).
Agriculture (1964 est.): *Cash farm income,* $32,723,000 (livestock, $16,542,000; crops, $15,854,000). *Chief crops* (cash receipts)—potatoes, $12,736,000 (ranks 3rd among the provinces); tobacco, $158,000 (rank, 3rd).
Mining (1964 est.): *Production value,* $843,115. *Chief minerals* (tons)—stone, 578,200 (ranks 6th among the provinces); sand and gravel, 187,600 (rank, 10th).
Fisheries (1964): *Commercial catch,* 41,010,000 pounds ($5,643,000). *Leading species*—lobster, 7,824,000 ($4,211,000), and hake, 7,739,000 ($239,000).
Transportation (1963): *Roads,* 3,265 miles (2,509 surfaced); *motor vehicles,* 35,314; *railroads,* 279 miles; *airlines,* 1 (3 airports).
Communications (1963): *Telephones,* 23,307; *television stations,* 1; *radio stations,* 2; *newspapers,* 3 (daily circulation, 28,092).

Frank MacKinnon
Principal, Prince of Wales College
Prince Edward Island

PRINTING AND PUBLISHING. See Book Publishing; Magazines; Newspapers.

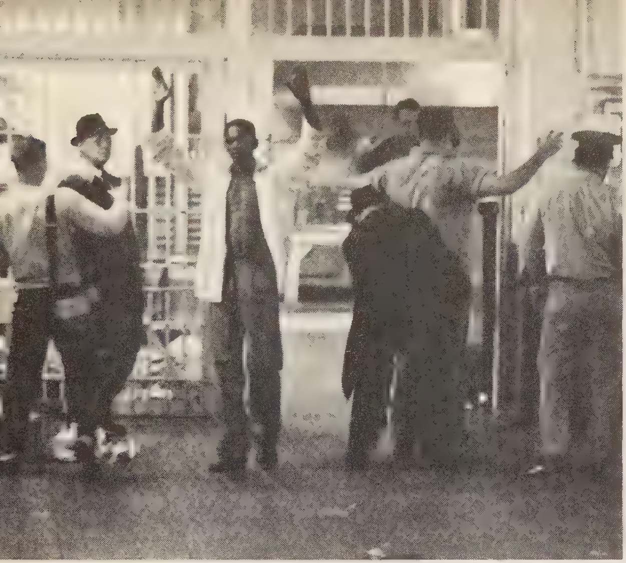
PRISONS

On Dec. 31, 1964, U.S. penal institutions held 214,356 adult prisoners. This figure was 1.3% less than the 217,283 prisoners confined at the end of 1963, marking the third consecutive year of decline in the year-end prison population. The year-end population in state institutions decreased from 194,155 in 1963 to 192,647 in 1964, and the federal prison population decreased from 23,128 to 21,709 in the same period.

More than half of the state prison population was accounted for by eight states—California (13.7%), New York (9.2%), Texas (6.4%), Ohio (6.2%), Illinois (4.5%), Michigan (4.2%), Pennsylvania (4.0%), and Georgia (3.8%). Exclusive of Alaska, the prison population was 112.5 per 100,000 civilian population.

In 1964 the courts committed 87,578 offenders to state and federal institutions—a decrease of 0.3% from the preceding year and the third straight year that court commitments had declined. The decrease occurred exclusively in federal court commitments, which dropped from 12,882 in 1963 to 12,482 in 1964—a decrease of 3.1%. State court commitments increased slightly for the first time since 1961, from 74,944 in 1963 to 75,096 in 1964.

During 1964 there was a total of 106,633 conditional and unconditional releases from state



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PRISONERS in Menard State Prison, Chester, Ill., surrender to guards on November 23 after a four-hour riot.

and federal penal institutions, an increase of 1.5% over 1963. State institutions released 91,533 prisoners by conditional and unconditional means in 1964, and federal institutions recorded 15,100 releases. The number of releasees returned to state and federal institutions for violating their parole or other conditional release increased by 3.4% in 1964 over the preceding year.

Capital Punishment. Fifteen executions, the fewest since 1930, were carried out by civil authorities during 1964. From 1930 through 1964, a total of 3,849 prisoners were executed.

BUREAU OF PRISONS INSTITUTIONS

Type of Institution	Population (July 1, 1964)	Population (July 1, 1965)
Penitentiaries:		
Atlanta, Ga	2,381	2,107
Leavenworth, Kans	2,312	2,222
Lewisburg, Pa	1,495	1,428
Marion, Ill	424	478
McNeil Island, Wash	1,060	954
Terre Haute, Ind	1,313	1,326
Reformatories:		
Alderson, W.Va. (women)	558	529
Chillicothe, Ohio	1,072	1,087
El Reno, Okla	923	937
Lompoc, Calif	977	1,087
Petersburg, Va	544	552
Institutions for juvenile and youth offenders:		
Ashland, Ky	509	493
Englewood, Colo	369	351
National Training School, Washington, D.C	331	280
Tucson, Ariz	89	90
Prerelease guidance centers:		
Brooklyn, N.Y	8	16
Chicago, Ill	21	18
Detroit, Mich	24	28
Los Angeles, Calif	25	29
Correctional institutions:		
Danbury, Conn	661	669
La Tuna, Tex	545	622
Milan, Mich	690	554
Sandstone, Minn	453	438
Seagoville, Tex	517	470
Tallahassee, Fla	715	719
Terminal Island (men), Calif	706	780
Terminal Island (women), Calif	170	179
Texarkana, Tex	497	457
Prison camps:		
Allenwood, Pa	242	279
Eglin Air Force Base, Fla	223	287
Florence, Ariz	194	244
McNeil Island, Wash	282	220
Montgomery, Ala	247	290
Safford, Ariz	196	199
Sewart Air Force Base, Smyrna, Tenn	246[1]	...
Detention headquarters:		
Florence, Ariz	42	58
New York, N.Y	213	212
Medical center:		
Hospital, Springfield, Mo	792	767
Maintenance Unit, Springfield, Mo	215	209

[1] Facilities closed, Feb. 5, 1965. Source: Federal Bureau of Prisons.

During 1965 the death penalty was abolished in Oregon, Iowa, Vermont, West Virginia, and in New York (except for those convicted of killing a police officer on duty, and for convicts under life sentence who commit murder in prison or while attempting to escape). The death penalty remains legal in 37 states and for federal crimes.

From 1960 through 1964 there were decreases both in the annual number of prisoners received from court under sentences of death and in the number of prisoners executed under civil authority. In the same period there were increases in the number of prisoners under sentence of death who received a disposition other than execution, and the number awaiting execution at year's end. Also, the time span between imposition of the death penalty and the date of execution increased during this five-year period.

Prison Riots. A rash of prison violence struck the nation in the fall of 1965. On October 18, demonstrations by inmates occurred in the Southern Michigan State Prison, Jackson, Mich., and at Maryland State Penitentiary, Baltimore, Md. During the electric power blackout in the Northeast on November 9–10, about 300 inmates of Walpole State Prison, Walpole, Mass., rioted for three hours. A bloody four-hour riot occurred at Menard State Prison, Chester, Ill., on November 23.

New Prison Facilities. As a result of increasing prison populations and overcrowding, several state prison systems undertook further expansion of their facilities in 1965. Georgia completed a $500,000 vocational rehabilitation center for the Georgia Industrial Institute in Alto. The center, used for testing, evaluating, diagnosing, and counseling the more than 1,000 youth residents at the institute, is equipped with the best modern facilities and is staffed by specialists.

Maryland began construction of prerelease and work release units for 200 inmates at the Maryland penitentiary. The state also has an extensive program to relieve overcrowding by building a multi-unit facility for 1,000 adult men at Hagerstown.

California opened its 13th major adult correctional institution, the 1,200-man Sierra Conservation Center, near Sonora. This center and two similar institutions provide basic training for inmates selected for later assignment to 80-man conservation camps. The first of two new institutions, each designed to house 400 boys, was under construction in 1965 at Stockton.

Alaska began construction of a Juvenile Diagnostic and Treatment Center at Anchorage. New Jersey reduced the problem of insufficient work and overcrowding by planning and building new industrial facilities, and by expanding the use of satellite work units and camps. Minnesota expanded the development of multiple-placement foster homes, known as group homes, for juvenile offenders. Ohio allocated $30,000,000 for the construction of two new adult institutions that will eventually eliminate the overcrowded and antiquated Ohio Penitentiary in Columbus.

The Federal Prison System announced plans for a new National Training School for Boys, to be located at Morgantown, W.Va. The new facility will replace the present outmoded institution in Washington, D.C.

MYRL E. ALEXANDER
Director, Bureau of Prisons

PRIZES AND AWARDS

The number of prizes and awards increased again in 1965, as foundations and industry competed to reward excellence in their respective fields of interest. The 1965 award list, however, did omit some notable prizes that had been given in past years. Some awards, such as the Balzan Peace Award, were discontinued for lack of funds. Others, such as the Presidential Medals of Freedom, were temporarily suspended. Guggenheim Foundation funds previously used for art prizes were redirected to the sponsorship of exhibitions, a practice that will be continued in the future.

On the other hand, many prizes, notably the Arches of Science Award, were introduced in 1965. Others were presented after a long absence, including the Howells Medal for American fiction, given every five years by the American Academy of Arts and Letters.

The UN Children's Fund won the 1965 Nobel Peace Prize—the fourth time that this award has gone to a unit of the United Nations. A Russian author, Mikhail Sholokhov, won the Nobel Prize in literature. Boris Pasternak, the only other Russian to win the Nobel literature prize, refused to accept the honor in 1958, but Sholokhov accepted it. (See NOBEL PRIZES.)

The Pulitzer Prize Committee restored the awards for fiction and drama in 1965 after a one-year hiatus but, for the second year, did not give a music award. The three-member music jury disbanded after the Pulitzer advisory board rejected its suggestion that a special citation be given to Edward K. (Duke) Ellington, jazz musician and composer.

The National Institute of Arts and Letters and the American Academy of Arts and Letters jointly announced a number of awards in the arts and in literature for 1965. Although the individual awards are given separately by each society, they were presented at a single ceremony sponsored by both organizations.

Among other noteworthy events, the Bennington (Vt.) *Banner*, with a circulation of about 5,000, received the Ayer Cup for newspaper excellence—the first time that so small a newspaper has won this prestigious award. National Book Awards were given posthumously for the first time, to poet Theodore Roethke (d. 1963) and scientist-writer Norbert Wiener (d. 1964).

The following is a selected list of the prizes and awards announced in 1965:

PRESIDENT HARRY S TRUMAN (at left), winner of Freedom Award for 1965, receives the congratulations of former Freedom Award winner Willy Brandt, mayor of West Berlin.

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PULITZER PRIZES

Winners of the Pulitzer Prizes were announced by the trustees of Columbia University on May 4, 1965. Fiction and drama awards, omitted in 1964, were given in 1965. However, neither the music prize (which was omitted in 1964) nor the editorial cartoon prize were included. Recipients of awards are as follows:

Journalism. Gold medal for meritorious public service rendered by a United States newspaper—Hutchinson (Kans.) *News*, for its successful effort to bring about reapportionment in Kansas. International reporting—Joseph Arnold Livingston of the Phildelphia (Pa.) *Bulletin*, for coverage of Soviet-satellite countries. National reporting—Louis M. Kohlmeier of the *Wall Street Journal*, for articles on President Johnson's personal fortune. Special local reporting—Gene Goltz of the Houston (Texas) *Post*, for his exposé of municipal corruption in Pasadena, Texas. General local reporting—Melvin H. Ruder of the *Hungry Horse News* (Columbia Falls, Mont.), for his coverage of the floods in northwestern Montana. Editorial writing—John R. Harrison of the Gainesville (Fla.) *Sun*, for his campaign to improve local housing. News photography—Horst Faas of the Associated Press, for his pictures of the war in Vietnam.

Letters. History—Irwin Unger, for *The Greenback Era;* biography—Ernest Samuels, for *Henry Adams;* poetry—John Berryman, for *77 Dream Songs;* fiction—Shirley Ann Grau, for *The Keepers of the House;* nonfiction—Howard Mumford Jones, for *O Strange New World;* drama—Frank D. Gilroy, for *The Subject Was Roses*.

All journalism awards, with the exception of the medal for public service, carry stipends of $1,000. Literary prizes are $500 each.

ARTS

American Institute of Architects, New York Chapter, Award of Merit—David Rockefeller, president of the Chase Manhattan Bank, for "demonstrating what a private citizen can do to give beauty, life, and new hope to his city."

Architectural League of New York national gold medals: architecture—Sert, Jackson, and Gourley, for the Francis Greenwood Peabody Terrace at Harvard University; engineering—Ammann and Whitney, for an assembly hall at the University of Illinois; sculpture—Isamu Noguchi, for the Beinecke Rare Book and Manuscript Library of Yale University; design and craftsmanship—Frederick Kiesler and Armand Bartos, for the Shrine of the Book at the D.S. and R.H. Gottesman Center for Rare Manuscripts, in Jerusalem.

Aspen Institute for Humanistic Studies, R.O. Anderson Award in the humanities ($30,000)—Martha Graham.

Brevoort-Eickemayer art prize of Columbia University ($1,000)—Edwin Dickinson.

Capezio Dance Award ($1,000)—Maria Tallchief of the New York City Ballet Company.

Chopin piano competition (Poland)—Martha Argerich of Argentina, and Arturo Moreira-Lima of Brazil.

Dance Magazine silver medallions—Edward Villela, Peter Gennaro, and John Butler.

Laurel Leaf Award of the American Composers Alliance—Elizabeth Ames, Avery Claflin, and Henry Cowell.

Leventritt international piano competition—Tong Il Han of Korea.

Michaels Memorial Music Award ($1,500)—Daniel Domb.

National Institute of Arts and Letters awards ($2,500): graphic art—Sigmund Abeles and Joyce Roepels; painting—Lee Gatch and Richard Mayhew; sculpture—David V. Hayes, Elliot Offner, and Thomas Stearns; music composition—Mario Davidovsky, Gerald Humel, Earl Kim, and Harvey Sollberger; Marjorie Peabody Waite Award ($1,500)—Paul Burlin, for continuing integrity in art; Arnold W. Brummer Award in Architecture ($1,000)—Kevin Roche.

National Institute of Arts and Letters Gold Medal for Painting—Andrew Wyeth; Richard and Hinda Rosenthall Award ($2,000)—Marcia Marcus, painter.

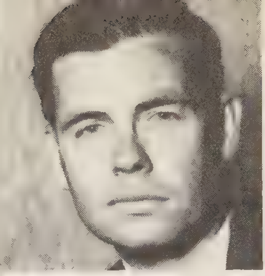
R.S. Reynolds Memorial Award, administered by the American Institute of Architects ($25,000)—James Stirling and James Gowan, for an engineering school building at

VICE ADM. HYMAN G. RICKOVER (center) accepts the Enrico Fermi Award of the U.S. Atomic Energy Commission from President Lyndon B. Johnson at the White House.

UPI

WIDE WORLD

J.A. LIVINGSTON, for his international reporting.

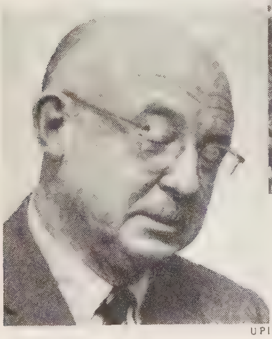


WIDE WORLD

FRANK D. GILROY, for the best dramatic play.

WIDE WORLD

HORST FAAS, for Vietnamese war photography.



UPI

HOWARD M. JONES, for the best nonfiction book.

Leicester University, Leicester, England.

Sonning Prize of Denmark (50,000 kroner, or $7,250)–Leonard Bernstein.

JOURNALISM

American Newspaper Guild Heywood Broun Memorial Award ($500)–Gene Goltz of the Houston (Texas) *Post.*

F. Wayland Ayer Cup for mechanical excellence in journalism–The Bennington (Vt.) *Banner.*

Maria Moors Cabot Gold Medals for "distinguished journalistic contributions to the advancement of international friendship and understanding in the Americas"–Gesford F. Fine, Latin-American editor for United Press International; Roberto Marinho, director of the newspaper *O Globo* of Rio de Janeiro, Brazil; Paul Sanders, Latin-American editor for the Associated Press; and Victoria Ocampo, founder and editor of *Sur,* a literary magazine of Buenos Aires, Argentina.

Foreign journalism awards of the University of California at Los Angeles: for distinguished achievement in journalism–Niels Norlund of the *Birlingske Tidende,* Copenhagen, Denmark, for "an appraisal of Martin Luther King"; for distinguished magazine reporting–Guido Gerosa of *Epoca* magazine, Rome, Italy, for "This Is Lyndon," an appraisal of President Lyndon B. Johnson; for newspaper reporting–Maarten C. Bolle of *Het Vrije Volk,* the Netherlands, for "Johnson's Popularity and Personality"; for distinguished radio/television reporting–John David Hamilton of the Canadian Broadcasting Corporation, for "The Southern Moderates."

Albert Lasker Medical Journalism Awards ($2,500): newspaper–Alton L. Blakeslee, science writer for the Associated Press, and Dr. Jeremiah B. Stamler, director of the heart control program of the Chicago Board of Health, for the series entitled *Your Heart Has Nine Lives;* magazine writing–Matt Clark, medical editor of *Newsweek* magazine, for his cover story on *Birth Control: The Pill and the Church;* television–Fred W. Friendly and Jay McMullen, for their program *The Business of Heroin* on *CBS Reports;* special citations–Edgar T. Bell of station KWTV, Oklahoma City, Okla., for his program *The Twilight World,* a study of mental retardation, and Jack Nelson, reporter in Atlanta, Ga., for the Los Angeles *Times,* for his series on the care of the mentally ill.

Long Island University, George Polk Memorial Awards for 1964: foreign reporting–Malcolm W. Browne, Saigon correspondent for the Associated Press; national reporting–Paul Hope and John Barron of the Washington (D.C.) *Star;* metropolitan reporting–A.M. Rosenthal of the New York *Times;* community service–Samuel F. Marshall, labor reporter for the Cleveland (Ohio) *Plain Dealer;* criticism–Robert Brustein, drama critic of the *New Republic* magazine; radio reporting–Edward P. Morgan of the American Broadcasting Company; television reporting–Ted Yates, producer and director of a special report on Vietnam for the National Broadcasting Company; special award–Oron J. Hale, for his book *The Captive Press in the Third Reich.*

George Jean Nathan Drama Criticism Award ($4,000)–Elliot Norton of the Boston (Mass.) *Record American* and *Sunday Advertiser.*

Overseas Press Club Awards for 1964: George Polk Memorial Award–George Clay of NBC (posthumously); interpretation of foreign affairs for a newspaper or wire service–Max Frankel of the New York *Times;* interpretation of foreign affairs in television–Marvin Kalb of CBS; interpretation of foreign affairs on radio–Bill Sheehan of ABC; interpretation of foreign affairs in magazines–Norman Cousins of the *Saturday Review;* daily newspaper or wire service reporting from abroad–Saul Pett of the Associated Press; still photography reporting from abroad–Akihiko Okamura of Tokyo; television reporting from abroad–Frank Bourgholtzer of NBC; radio reporting from abroad–Dean Brelis of NBC; magazine reporting from abroad–*Sports Illustrated;* book on foreign affairs–Robert Trumbull of the New York *Times,* for *The Scrutable East;* Robert Capa Award for photography–Horst Faas of the Associated Press; Ed Stout Award for Latin American reporting–Bernard L. Collier of the New York *Herald Tribune;* E.W. Fairchild Award for business news reporting from abroad–Don C. Winston of McGraw-Hill's World News Bureau; special awards for outstanding journalistic achievement–John Scali of Station KTLA, Los Angeles, Calif.; Baldwin Baker, Jr.

LITERATURE

Academy of American Poets Fellowship Award ($5,000)–Marianne Moore.

American Academy of Arts and Letters, Howells Medal for American fiction (given every five years)–John Cheever, for *The Wapshot Scandal;* traveling fellowship in literature ($5,000 to $6,500)–Cormac McCarthy.

American Academy of Arts and Sciences Emerson-Thoreau Medal for distinguished achievement in the field of literature ($1,000)–Lewis Mumford.

American Library Association awards: Newbery Medal–Maia Wojciechowska, for *Shadow of a Bull;* Caldecott Medal–Beni Montresor, for *May I Bring a Friend?;* Scarecrow Press Award for library literature–Roberta Bowler, editor of *Local Public Library Administration;* Lippincott Award–Frances Clarke Sayers, former lecturer at the School of Library Service of the University of California at Los Angeles; Grolier Society Award–Sarah Lewis Jones, chief library consultant for the Georgia State Department of Education; Clarence Day Award–Elizabeth Nesbit, former senior lecturer at the Graduate School of Library and Information Sciences of the University of Pittsburgh; Melcher scholarship ($1,500)–Mary Ann Stevenson, specialist in television storytelling at Ann Arbor, Michigan.

Bancroft Prizes of Columbia University for distinguished writing in American history, diplomacy, and international relations during 1964 ($4,000)–Dorothy Borg, for *The United States and the Far Eastern Crisis of 1933–38;* Bradford Perkins, for *Castlereagh and Adams: England and the United States;* and William B. Willcox, for *Portrait of a General: Sir Henry Clinton in the War of Independence.*

Catholic Book Awards: fiction–Paul Horgan, for *Things as They Are;* biography–*Priest and Worker: The Autobiography of Henri Perrin;* spiritual writing–Karl Rahner, for *The Eternal Year;* Christian living–Louis Evely, for *That Man Is You;* scriptural and theological writing–Rev. Hans Küng, S.J., for *Structures of the Church;* writing for youth–Andrew Greeley, for *And Young Men Shall See Visions;* general nonfiction–Pierre Teilhard de Chardin, for *The Future of Man.*

Carey-Thomas Award for a distinguished project of creative book publishing–Sierra Club of San Francisco, Calif., for its Exhibit Format Series, as represented by two 1964 books, *Time and the River Flowing* and *The Last Redwoods.*

Formentor Prize (Prix Formentor) for the best unpublished new work of fiction ($10,000)–Stephen Schneck, for *The Nightclerk.*

Goncourt Prize in literature (Prix Goncourt)–Jacques Borel, for his first novel, *L'Adoration.*

Governor-General's Awards (Canadian) for 1964: English fiction–Douglas LePan, for *The Deserter;* English poetry–Raymond Souster, for *The Colour of the Times;* English biography–Phyllis Grosskurth, for *John Addington Symonds;* French drama–Pierre Perrault, for *Au coeur de la rose;* French nonfiction–Fr. Réjean Robidoux, for *Roger Martin du Gard et la religion;* French fiction–Jean-Paul Pinsonneault, for *Les terres sèches.*

International Non-fiction Prize ($12,500)–Walter Sullivan, for *We Are Not Alone.*

International Prize for Literature (Prix International de Littérature; $10,000)–Saul Bellow, for *Herzog.*

Irita Van Doren Award ($2,000)–Robert Penn Warren, for *Who Speaks for the Negro?*

Kalinga Prize, an international literary award (£1,000; *about* $2,800)–Warren Weaver.

Mystery Writers of America, Edgar Allan Poe awards for 1964: best mystery novel–John Le Carré, for *The Spy Who Came in from the Cold;* best first mystery novel–Harry Kemelman, for *The Rabbi Slept Late;* best fact crimewriting–Anthony Lewis, for *Gideon's Trumpet;* best juvenile mystery–Marcella Thum, for *Mystery at Crane's Landing;* best mystery short story–Lawrence Treat, for *H as in Homicide;* best mystery book jacket design–Doubleday and Bantam Books, publishers; best motion-picture mystery–*Hush, Hush, Sweet Charlotte;* best television mystery–*The Fugitive.*

National Book Awards for 1964 ($1,000): fiction–Saul Bellow, for *Herzog;* arts and letters–Eleanor Clark, for *The Oysters of Locmariaquer;* poetry–Theodore Roethke (posthumously), for *The Far Field;* history and biography–Louis Fischer, for *The Life of Lenin;* science, philosophy, and religion–Norbert Wiener (posthumously), for *God and Golem, Inc.*

National Book Committee, National Medal for Literature ($5,000)—Thornton Wilder.

National Institute of Arts and Letters, Rosenthall Award ($2,000)—Thomas Berger, for *Little Big Man;* gold medal for essays and criticism—Walter Lippmann.

National Institute of Arts and Letters literary awards ($2,500)—Ben Belitt, poet; Robert Bly, poet and critic; Denise Levertov; poet; Joseph Mitchell, local historian; Pier M. Pasinelli, novelist; Henry Roth, novelist; and Harvey Swados, novelist.

Netherlands State Literary Prize for 1964 (the P.C. Hooft Award)—Leo Vroman, American-born Dutch poet.

Poetry Society of America Awards: Shelley Memorial Award ($1,475)—Ruth Stone; Melville Cane Award ($500)—Jean H. Hagstrum; awards for collections of poems still in progress ($3,500)—Barbara Overmyer and Paul Roche.

Somerset Maugham Award (£500, or $1,400)—Peter Everett, for his novel *Negatives.*

Woodrow Wilson Foundation Book Awards of the American Political Science Association—Robert Agger, Daniel Goldrich, and Bert Swanson, for *The Rulers and the Ruled: Political Power and Impotence in American Communities,* and Samuel J. Eldersveld, for *Political Parties: A Behavioral Analysis.*

PUBLIC SERVICE

Anisfield-Wolf Awards for the best scholarly work concerned with the problem of race relations ($750)—James McPherson, for *The Struggle for Equality;* Milton M. Gordon, for *Assimilation in American Life;* James M. Silver, for *Mississippi: The Closed Society;* and Abram L. Sachar, for *A History of the Jews.*

Anti-Defamation League of B'nai B'rith, America's Democratic Legacy Award—President Lyndon Baines Johnson.

Criss Award of the Mutual of Omaha Insurance Company for rehabilitative work with persons who are physically handicapped from cancer of the larynx ($10,000)—William Gargan.

Four Freedoms Award—President John Fitzgerald Kennedy (posthumously).

Freedoms Foundation George Washington Award ($5,000)—Lila and deWitt Wallace, publishers of the *Reader's Digest* magazine, for "building a magazine invaluable in the continuing fight for the freedom and dignity of every individual."

Theodor Herzl Award of the Zionist Organization of America—former President Harry S Truman, for being the "first to recognize Israel reborn."

Human Rights Award—Vice President Hubert Horatio Humphrey, for his "distinguished record as a champion of human rights."

Kurt Lewin Memorial Award of the Society for the Psychological Study of Social Issues—Kenneth B. Clark.

Herbert H. Lehman Medal—David Sarnoff, board chairman of the Radio Corporation of America.

National Brotherhood Award of the National Conference of Christians and Jews—Agnes E. Meyer, chairman of the National Committee for the Support of the Public Schools.

Paderewski Foundation Award—Francis Cardinal Spellman, for his moral and financial assistance to the starving people of Poland after World War I.

Rockefeller Public Service Awards for outstanding long-time service to the federal government ($10,000)—U. Alexis Johnson, deputy undersecretary of state for political affairs; Margaret Arnstein of the U.S. Public Health Service; Bertrand M. Harding of the U.S. Internal Revenue Service; and William B. McLean, China Lake, Calif., technical director of the U.S. Naval Ordnance Station.

Stephen S. Wise Award of the American Jewish Congress—Arthur J. Goldberg, chief U.S. representative at the United Nations, for his work in advancing the cause of human freedom.

RADIO AND TELEVISION

Academy of Television Arts and Sciences ("Emmy") Awards; programs of the year—*The Louvre* (NBC) and *I, Leonardo da Vinci* (ABC); outstanding entertainment programs—*The Sonata Form,* New York Philharmonic Young People's Concerts (CBS), and its conductor, Leonard Bernstein; *The Magnificent Yankee,* Hallmark Hall of Fame (NBC), and its costars Alfred Lunt and Lynn Fontanne; the *Dick Van Dyke Show* (CBS), and its star Dick Van Dyke; *My Name is Barbra* (CBS), and its star Barbra Streisand; writing, public affairs—Sidney Carroll, for *The Louvre* (NBC); music, public affairs—Norman Dello Joio, for *The Louvre* (NBC); film editor, public affairs—Aram Boyajian, for *The Louvre* (NBC); cinematography, public affairs—Tom Priestley, for *The Louvre* (NBC); international award—*Le Barbier de Séville,* La Société Radio-Canada (Canadian Broadcasting Corporation); station award, regional—*The Ku Klux Klan,* WDSU-TV, New Orleans, La.; writing achievement—David Karp, for *The 700 Year-Old Gang, The Defenders* series (CBS); lighting director—Phil Hynes, for *The Magnificent Yankee,* Hallmark Hall of Fame (NBC); technical director—Clair McCoy, for *The Wonderful World of Burlesque* (NBC); special photographic effects—L.B. Abbott, for *Voyage to the Bottom of the Sea* (ABC); art, set decoration—Tom John and Bill Harp, for *My Name is Barbra* (CBS), and Warren Clymer, for *The Holy Terror,* Hallmark Hall of Fame (NBC); makeup—Robert O'Bradovich, for *The Magnificent Yankee,* Hallmark Hall of Fame (NBC); color consultant—Edward Ancona, for the *Bonanza* series (NBC); cinematography—William Spencer, for *12 O'Clock High* (ABC); conception, choreography, and staging—Joe Layton, for *My Name is Barbra* (CBS); direction—Paul Bogard, for *The 700 Year-Old Gang, The Defenders* series (CBS); music director—Peter Matz for *My Name is Barbra* (CBS); achievement in news, documentary, information, and sports—John H. Secondari and Helen Jean Rogers, for *I, Leonardo da Vinci* (ABC); producers—Lucy Jarvis and John J. Sughrue, for *The Louvre* (NBC).

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BARBRA STREISAND holds Emmy from Television Academy of Arts and Sciences for outstanding individual achievement.

George Foster Peabody Awards for distinguished achievement in 1964: television—*CBS Reports, Profiles in Courage* (NBC), and *The Louvre* (NBC); Burr Tillstrom, puppeteer, for his appearances on *That Was the Week That Was* (NBC); Joyce C. Hall, president of Hallmark Cards, Incorporated, "for being television's consistent and practical champion of the theater"; *The French Chef,* a cooking program with Julia Child, WGBH, Boston, Mass.; *Off the Cuff,* a program on station WBKS, Chicago, Ill.; documentaries produced by the International Television Federation; New York City FM radio station WRVR; William H. Lawrence, White House correspondent and political news editor, ABC, for individual excellence as a reporter and as a representative of the corps of White House correspondents; and the networks and the broadcasting industry, for "inescapably confronting the American public with the realities of racial discontent."

SCIENCE AND TECHNOLOGY

Albert Lasker Medical Research Awards ($10,000)—Albert B. Sabin, for the development of a live oral poliomyelitis vaccine, and Robert W. Holley, for helping to decipher the code to the chemistry of life.

Alfred P. Sloan Foundation Awards for cancer research ($10,000)—Irwin H. Krakoff, Henry T. Randall, and C. Chester Stock.

American Association for the Advancement of Science Award ($1,000)—John Papaconstantinou of the University of Connecticut.

American Chemical Society (ACS)) Awards: Alpha Chi Sigma Fraternity Award in pure chemistry—Ronald Breslow; ACS award for the advancement of inorganic chemistry ($1,000)—George H. Cady; James T. Grady Award for science writing ($1,000)—Frank Carey; Fisher Award in analytical chemistry—Lyman C. Craig; ACS Award for creative work in synthetic organic chemistry—William von E. Doering; Fritsch Award ($1,000)—Albert J. Eschenmoser; Frederic Stanley Kipping Award in organosilicon chemistry ($1,000)—Gerhard Fritz; Irving Langmuir Award in chemical physics—Herbert S. Gutowsky; James Flack Norris Award in physical organic chemistry ($1,000)—Louis P. Hammett; Kendall Company Award in colloid chemistry ($1,000)—Robert S. Hanse; Peter Debye Award in physical chemistry ($1,000)—J.O. Hirschfelder; ACS Award in chromatography and electrophoresis ($1,000)—Kurt A. Kraus; ACS Award in the chemistry of milk ($1,000)—Bruce L. Larson; Garvan Medal (and $1,000)—Mary L. Petermann; ACS Award in chemical education ($1,000)—W. Conway Pierce; ACS Award in biological chemistry ($1,000)—Phillips W. Robbins; ACS Award in chemical instrumentation ($1,000)—Leonard T. Sketts; ACS Award in polymer chemistry ($1,500)—Walter H. Stockmayer; ACS Award for nuclear applications in the field of chemistry ($1,000)—Arthur C. Wahl; ACS Award in petroleum chemistry ($5,000)—James Wei; ACS Award in industrial and engineering chemistry ($1,000)—Richard H. Wilhelm; ACS Award in inorganic chemistry ($1,000)—Geoffrey Wilkinson; ACS Award in enzyme chemistry ($1,000)—Samuel B. Weiss; Priestley Medal—W.O. Baker.

American Geographical Society Awards for 1965: Cullum Geographical Medal—Kirtley F. Mather, professor emeritus, Harvard University; Charles P. Daly Medal—William S. Cooper, professor emeritus; David Livingstone Centenary Medal—Bassett Maguire, New York Botanical Garden.

American Heart Association Research Achievement

Award ($1,000)—John H. Gibbon, Jr., of the Jefferson Medical College, Philadelphia.

American Institute of Aeronautics and Astronautics Goddard Award ($10,000 and gold medal)—Sir Frank Whittle of England, for his patent (1930) on the jet propulsion engine.

American Institute of Aeronautics and Astronautics: Louis W. Hill Space Transportation Award—Wernher von Braun; flight test engineering fellowship—James Austin Franklin of General Dynamics Corp.

American Society of Metals: William Hunt Eisenman Award—George A. Nelson, Berkeley, Calif.; Albert Sauveur Achievement Award—Clarence Cener, of the Westinghouse Research Laboratories, Pittsburgh; Albert Easton White Distinguished Teacher Award—John Wulff, of the Massachusetts Institute of Technology; Henry Marion Howe Medal—W.A. Backofen, I.R. Turner, and D.H. Avery, of the Massachusetts Institute of Technology; Marcus A. Grossmann Award—E.T. Stephenson and G.H. Karchner, of the Bethlehem Steel Corporation, and Philip Stark of General Precision, Inc.

Arches of Science Award for outstanding contributions to the public understanding of science ($25,000 and gold medal)—Warren Weaver.

Oliver E. Buckley Solid State Physics Prize of the American Physical Society ($1,000 and medal)—Ivar Giaever, of the General Electric Research Laboratory.

Dannie Heineman Prize for mathematical physics ($2,500)—Freeman J. Dyson of the Institute for Advanced Study, Princeton, N.J.

Enrico Fermi Award of the United States Atomic Energy Commission for engineering and administrative leadership in the development of safe and reliable nuclear power ($25,000 and medal)—Vice Adm. Hyman G. Rickover.

Flight Safety Foundation: Barbour Award for major contributions to the safety of air transport—Arthur E. Jenks.

Geological Society of America: Penrose Medal for achievement in the field of geology—Philip B. King of the U.S. Geological Survey; Arthur L. Day Medal for outstanding contributions to geologic knowledge—Walter H. Munk, of the University of California at San Diego.

Harmon International Aviation Trophies for 1965: aviator—Max Conrad; woman flier—Joan Merrian Smith.

John Scott Scientific Awards, administered by the Philadelphia Board of City Trusts, to "ingenious men who make useful inventions" ($2,000, a medal, and a scroll)—Alexander Kolin of the University of California, for an electromagnetic method of measuring the flow of liquids; Sir Howard W. Florey of London, England, for extending the uses of penicillin; John T. Guthrie and Wilson Reeves, of New Orleans, La., for a process of flameproofing cellulosic textiles; and Frank I. McClure of the Johns Hopkins University, Baltimore, Md., for a new method of navigation using signals from special orbiting satellites.

Lederle Medical Faculty Award ($30,000)—Richard Kikuni Blaisdell of the University of Chicago for his superior talents as a teacher.

Irving Langmuir Award for studies in chemical physics ($5,000)—John H. Van Vleck of Harvard University.

National Academy of Sciences: Agassiz Medal—Sir Edward Bullard of England for his "significant investigation of the earth from its surface to its core."

National Aeronautics and Space Administration Medal for outstanding leadership—Lt. Gen. Walter K. Wilson, Jr., chief of engineers, U.S. Army.

National Association for Industry-Education Cooperation Award—The American Petroleum Institute.

National Medals of Science for 1965—Hugh L. Dryden, deputy administrator of the National Aeronautics and Space Administration (posthumously); John Bardeen, professor of physics and electrical engineering at the University of Illinois; Peter J.W. Debye, professor emeritus of chemistry at Cornell University; Clarence Leonard Johnson, vice president for advanced development projects for the Lockheed Aircraft Corporation; Warren Kendall Lewis, emeritus professor of chemical engineering at the Massachusetts Institute of Technology; Francis Peyton Rous, medical researcher at the Rockefeller Institute, New York City; William Walden Robey, professor of geology and geophysics at the University of California in Los Angeles; George Gaylord Simpson, Agassiz professor of vertebrate paleontology at Harvard University; Donald Dexter Van Slyke, research chemist at the Brookhaven National Laboratory; Oscar Zariski, professor of mathematics at Harvard University; and Leon Max Lederman, professor of physics at Columbia University.

National Space Club Robert H. Goddard Memorial Trophy—William H. Pickering, director of the jet propulsion laboratory at Pasadena, Calif.

Saint-Vincent International Prize for medical science, given by the Turin Academy of Medicine, Italy ($6,000)—Michael Ellis deBakey of Baylor University.

James Craig Watson Medal of the National Academy of Sciences—Paul Herget of the University of Cincinnati Observatory.

THEATER AND MOTION PICTURES

Academy of Motion Picture Arts and Sciences ("Oscar") Awards for 1964: best film—*My Fair Lady;* best foreign-language film—*Yesterday, Today, and Tomorrow* (Italian); best actress—Julie Andrews, for her role in *Mary Poppins;* best actor—Rex Harrison, for his role in *My Fair Lady;* best supporting actress—Lila Kedrova, for her role in *Zorba, the Greek;* best supporting actor—Peter Ustinov, for his role in *Topkapi;* best director—George Cukor, for *My Fair Lady;* best screenplay based on material from another medium—Edwin Anhalt, for his adaptation of *Becket;* best original screenplay—Peter Stone and Frank Tarloff, for *Father Goose;* best musical score—Richard M. Sherman and Robert B. Sherman, for *Mary Poppins;* best original song—*Chim Chim Cher-ee,* from *Mary Poppins,* by Richard M. Sherman and Robert B. Sherman; best art direction, color—Gene Allen and Cecil Beaton, for *My Fair Lady;* best art direction, black and white—Zassilis Photopoulos, for *Zorba, the Greek;* best cinematography, color—Harry Stradling, for *My Fair Lady;* best cinematography, black and white—Walter Lassally, for *Zorba, the Greek;* best costume design, black and white—Dorothy Jeakins, for *The Night of the Iguana;* best costume design, color, Cecil Beaton, for *My Fair Lady;* best special effects—Peter Ellenshaw, for *Mary Poppins;* best sound effects—Norman Wanstall, for *Goldfinger;* best sound—Warner Brothers Sound Department, for *My Fair Lady;* best feature documentary—Jacques-Yves Cousteau, for *World Without Sun;* best short documentary—Guggenheim Productions, for *Nine from Little Rock;* best film editing—Cotton Warburton, for *Mary Poppins;* best live-action short subject—Edward Schreiber, for *Casals Conducts—1964;* best cartoon short subjects—*The Pink Phink,* by David H. DePatie and Friz Freleng, best scientific or technical achievement—Peter Vlahos, Wadsworth E. Pohl, and Ub Iwerks; best set decoration, black and white—George J. Hopkins, for *Zorba, the Greek;* best makeup—William Tuttle, for *The Seven Faces of Dr. Lao.*

American National Theater and Academy (ANTA) Award—Joseph Papp.

American Theater Wing, Antoinette Perry ("Tony") Awards for 1964–65; best drama—*The Subject Was Roses,* by Frank D. Gilroy; best musical—*Fiddler on the Roof,* based on the short stories of Sholem Aleichem; best musical star and actor—Zero Mostel, in *Fiddler on the Roof;* best musical star and actress—Liza Minnelli, in *Flora, the Red Menace;* best dramatic actor—Walter Matthau, in *The Odd Couple;* best dramatic actress—Irene Worth, in *Tiny Alice;* best dramatic supporting actor—Jack Albertson, in *The Subject Was Roses;* best dramatic supporting actress—Alice Ghostly, in *The Sign in Sidney Brustein's Window;* best musical supporting actor—Victor Spinetti, in *Oh, What a Lovely War;* best musical supporting actress—Maria Karnilova, in *Fiddler on the Roof;* best dramatic director—Mike Nichols for *Luv* and *The Odd Couple;* best musical director—Jerome Robbins, for *Fiddler on the Roof;* best dramatic author—Neil Simon, for *The Old Couple;* best musical author—Joseph Stein, for *Fiddler on the Roof;* best composer and lyricist—Jerry Bock and Sheldon Harnick, for *Fiddler on the Roof;* best scenic designer—Oliver Smith, for *Baker Street, Luv,* and *The Odd Couple;* best costume designer—Patricia Zipprodt for *Fiddler on the Roof;* best choreographer—Jerome Robbins, for *Fiddler on the Roof;* special award for distinguished contribution to the theater—Gilbert Miller.

Cannes International Film Festival Awards: Gold Palm Grand Prix—*The Knack* (British); special jury prize—*Kwaidan* (Japanese); actress—Samantha Eggar (American), in *The Collector;* actor—Terence Stamp (British), in *The Collector;* scenarios—*The Hill* (British) and *The 317th Section* (French); director—Liviu Ciulei (Rumanian), for *Forest of the Hanged.*

Clarence Derwent Awards for the best nonfeatured performances of 1964–65 ($500)—Elizabeth Hubbard, in *The Physicists,* and Jaime Sanchez, in *Conerico Was Here to Stay.*

Drama Desk—Vernon Rice Awards for outstanding achievements in the Off-Broadway theater: playwrights—Robert Lowell, for *The Old Glory,* and Harold Willis, for *A Sound of Silence;* director—Ulu Grosbard, for *A View from the Bridge;* actor—James Earl Jones, for *Othello;* actresses—Barbara Ann Teer, for *Home Movies,* and Susan Towers, for *Shout from the Rooftops.*

New York Drama Critics Circle Theater Awards for 1964–65; drama—*The Subject Was Roses;* musical—*Fiddler on the Roof.*

New York Film Critics Awards for 1965: best English language picture—*Darling;* best actor—Oskar Werner, in *Ship of Fools;* best actress—Julie Christie, in *Darling;* best director—John Schlesinger, for *Darling;* best foreign-language film—*Juliet of the Spirits* (Italian) by Federico Fellini.

Screen Producers Guild Awards: Best produced motion picture of the year—*My Fair Lady;* best produced television show of the year—*Slattery's People;* annual Milestone Award—Alfred Hitchcock, in honor of his "historic contributions to the American motion picture."

Venice International Film Festival awards: Golden Lion of St. Mark for the best film—*Vaghe Stelle dell' Orsa* (Italian), directed by Luchino Visconti and starring Claudia Cardinale, Jean Sorel, and Marie Bell; Volpi Cup for the best performance by an actress—Annie Girardot in *Trois chambres à Manhattan* (French), directed by Marcel Carne; Volpi Cup for the best performance by an actor—Toshiro Mifune in *Akahige* (Japanese); special jury prizes—shared by the Mexican film *Simon del Desierto,* directed by Luis Buñuel, and the Russian film *I Am Twenty Years Old,* directed by Marlen Kutziev; award for outstanding initial work in films—Pietr Toderovski (Russian) for his comedy drama of young Soviet soldiers training for battle, *Fedelta;* Roman Catholic Film Office Award—*Akahige* (Japanese).

PRODUCTION, Industrial. See Industrial Production.

PROPERTY INSURANCE. See Insurance.

PROTESTANTISM. See Religion.

PSYCHIATRY. See Mental Health.

PSYCHOLOGY

The interests and activities of psychologists in 1965 were reflected in the proceedings of the 73rd annual convention of the American Psychological Association (APA), held in Chicago on Sept. 3–7, 1965. APA President Jerome Bruner, of Harvard University, addressed the convention on the subject "The Growth of Mind." The address not only dealt with the growth of mind as such, but also with the growth of psychology in its efforts to understand mind. Nicholas Hobbs of George Peabody College is president-elect of the APA, and Gardner Lindzey of the University of Texas is the new president-elect.

Concern with Current Human Interests. A number of sessions at the convention were devoted to sociopolitical behavior. These sessions dealt with such matters as the correlation between personality traits and preference for political candidates, the relation between extensive frustration and aggressive behavior at the national level, and attitudes toward controversial campus speakers. Other symposia discussed "The International Man," as exemplified by UN delegates, Peace Corps volunteers, and interpreters; "The Legitimation of Evil," which explored the effects of the conflict between legal institutions, when these institutions sanction evil, and the drive to eliminate evil (for example, civil disobedience); and "Youth in Revolt around the World."

Also relevant to current interests was a session devoted to the topic "Biological and Psychological Effects of Magnetic Field." This is an old concern under a new guise. The notion of emanations guiding individual personality and destiny has long been classed as superstition. However, the interest in space exploration has led some scientists to take a new look at the possible influence on man of changes in the magnetic field around him.

Methodological and Ethical Problems. APA conventions devote themselves to many matters of professional interest besides scientific findings and conjectures. One matter discussed in 1965, stemming from the increasing sophistication of the methods used in social psychology, was the ethical problems involved in experiments with human beings. The convention also studied the conflicting rights, responsibilities, and expectations of textbook authors, publishers, editors, and readers, and the legal problems connected with psychological services in schools, industry, and civil rights affairs.

Expansion of Subject Matter. The APA convention program and *Annual Review of Psychology* give the most compact overview of trends and emphases in psychology, although even these cannot present a complete picture of current developments. The 1965 *Annual Review of Psychology,* a 600-page volume that discusses current contributions to psychology, included three chapters on sensory-perceptual problems—"Audition," "Visual Acuity," and "The Chemical Senses"—and chapters entitled "Hypnosis" and "Psychological Aspects of Aging in Man." The 1966 volume will include chapters entitled "Engineering Psychology," "Behavior Genetics," and "Electrophysiology and Behavior."

ALFRED G. DIETZE
Professor of Psychology
Michigan State University

PUBLIC ASSISTANCE. See CHILD WELFARE; OLD AGE; SOCIAL SECURITY.

PUBLIC DEBT. See BUDGET, U.S.

PUBLIC HEALTH

Landmark legislation and further progress in the prevention and treatment of disease characterized public health in the United States in 1965. A notable event was the White House Conference on Health in November, at which distinguished leaders called together by President Johnson considered new health goals for the nation. In September, President Johnson appointed Dr. William H. Stewart to be surgeon general of the Public Health Service, principal health agency of the federal government. Dr. Stewart is the 10th surgeon general in the 167-year history of the service.

Legislation. In an historic action, Congress amended the Social Security Act to provide a health insurance program for persons aged 65 and over, beginning July 1, 1966. The program will help some 19,000,000 Americans meet the cost of hospital, nursing home, and home health care. (See MEDICARE.)

The Heart Disease, Cancer, and Stroke Amendments of 1965 authorized federal grants to aid in the establishment of regional medical centers to combat these diseases, which kill more than 1,000,000 Americans annually.

Acting upon the report of the Surgeon General's Advisory Committee on Smoking and Health, Congress passed the Federal Cigarette Labeling and Advertising Act. It requires that all cigarette packages sold in the United States after Jan. 1, 1966, be labeled: "Caution: Cigarette Smoking May Be Hazardous to Your Health."

In a year notable for health legislation, Congress also established a new program of grants to accomplish the following: (1) strengthen the nation's health libraries; (2) continue federal matching grants for construction of health research facilities in universities and other institutions; (3) extend the Health Professions Educational Assistance Act of 1963 and broaden it with new improvement grants to schools of medicine, dentistry, osteopathy, and optometry, and for student scholarships; (4) continue federal participation in such community health programs as immunization campaigns; and (5) authorize grants to help community mental health centers meet staffing costs.

Environmental Health. New legislation reinforced efforts to curb pollution of air, water, and earth. The Clean Air Act was amended to authorize the Department of Health, Education, and Welfare to establish federal standards for exhaust control on new motor vehicles. The Solid Waste Disposal Act authorized a national research program in methods of waste disposal, and provided for aid to state, community, and interstate agencies to develop disposal programs. (See also POLLUTION.)

The Federal Water Quality Act of 1965 created a new administration of water pollution control within the Department of Health, Education, and Welfare, and provided for the establishment of federal water quality standards in cooperation with the states. The act also authorized accelerated programs of federal aid to states and communities to build sewage treatment plants and to conduct research in water pollution control. (See also WATER SUPPLY.)

The Public Health Service established an Office of Pesticides, which has initiated the first major investigations of the long-term relationships between use of pesticides and human health.

Communicable Diseases. No major nationwide epidemics occurred in 1965, but local areas had problems. Gastrointestinal diseases were active; for example, California experienced a water-borne outbreak of salmonellosis, the first of its nature in public health records. Encephalitis reached its highest peak in 10 years and extended into areas never before affected. Outbreaks were concentrated in Texas, New Jersey, and Colorado.

Research. Scientists continued to add to our understanding of the life processes and of the cause and treatment of diseases. The first successful field-testing of a live oral vaccine against adenovirus 4, which had caused epidemics of respiratory disease among military trainees, brightened the prospect for preventing other such diseases.

Cancer scientists continued their intensive investigation of the role of viruses in leukemia. In heart research, a cooperative study was launched by the Public Health Service and other research institutions throughout the country to assess the effectiveness of various lipide-lowering drugs and hormones in reducing recurrences of heart attacks and in decreasing mortality. Development of an artificial heart received high priority. (See HEART DISEASE.)

Valuable advances were made also in research on such topics as arthritis, diabetes, neurological diseases, and human development.

Vital Statistics. In 1964, a total of 4,054,000 births was registered in the United States. This rate, 21.2 per 1,000 population, represents a decline from the most recent peak of 25.0 in 1957.

Infant mortality and maternal death rates were the lowest on record for the United States. About 40 infants per 1,000 live births died within a year of birth.

In 1964, life expectancy at birth was 70.2 years, compared with 69.9 years in 1963. In recent years, life expectancy has been increasing at a faster rate for men than women, and at a faster rate for nonwhites than for whites.

There were 1,801,000 deaths in 1964, an estimated rate of 9.4 per 1,000 population. The death rate was higher than in any other recent year in which the country was relatively free of influenza. The major cardiovascular-renal diseases, cancer, and accidents were the leading causes of death. The relative importance of cardiovascular-renal diseases and cancer as causes of death has not changed greatly since 1954. However, the death rate from cancer of the respiratory system rose in this decade from 17.1 to 25.3 per 100,000 population. (See also DEATH RATES; MEDICINE.)

WILLIAM H. STEWART
Surgeon General, U.S. Public Health Service

PUBLIC OPINION SURVEYS

Two anniversaries in 1965 provided occasions for public opinion researchers to review their short but significant history.

The Gallup Poll. Just 30 years ago, the first Gallup Poll report appeared in U.S. newspapers, introducing the notion that a small cross section of carefully chosen individuals can accurately represent the views of all. In October 1965, in a special newspaper release marking the anniversary, the Gallup Poll reviewed its work and concluded that (1) the collective judgment of the people is extraordinarily sound, (2) the public is willing to make great sacrifices for the national good in times of crisis, and (3) the will of the people is translated into law sooner or later.

Organization Activities. The American Association for Public Opinion Research (AAPOR) held its 20th annual conference in Groton, Conn., in May 1965. The association, which now has 1,000 members, was founded in 1946 in an effort to bring together the diverse practitioners of market and opinion research, the users of survey findings, and the academic disciplines that contribute to survey techniques. The AAPOR award for distinguished achievement in public opinion research was presented posthumously to Harry H. Field, who in 1941 founded the first nonprofit polling agency and who in 1946 called the conference from which the association emerged.

The World Association for Public Opinion Research, an international group similar to AAPOR, held its general conference in Dublin, Ireland, in September 1965, and the second of a series of regional conferences in Dubrovnik, Yugoslavia, in May. At the latter conference, 180 participants from both eastern and western Europe discussed mutual problems and findings. It is apparent that surveys of radio listening, consumer attitudes and behavior, and public opinions and values are becoming commonplace in Yugoslavia, Czechoslovakia, Rumania, Hungary, Poland, and the Soviet Union.

Anti-Poverty Surveys. The use of public opinion research was spurred by the anti-poverty legislation passed by Congress in 1964. The legislation requires an evaluation of the effectiveness of the new programs. For example, a number of Job Corps applicants who were not admitted to the program are being given the same battery of tests that is administered to incoming corpsmen. The noncorpsmen will be checked annually for the next two years; their employment history and personality development will then be compared with those of the corpsmen in an effort to determine the effects of the Job Corps training.

Collation of Data. With hundreds of thousands of questions being asked of millions of people all over the world, more and more attention is being given to organizing and storing those surveys that have been made public and to providing ready access to their findings. A new journal, *Polls*, published in Amsterdam, the Netherlands, will attempt to provide a quarterly digest of survey results. Its first two issues presented data from more than 20 countries. Since establishment in 1957 of the Roper Center for Public Opinion Research at Williams College, other archives of poll data have been established at universities in the United States and abroad. Efforts are now in progress to coordinate the work of these archives.

PAUL B. SHEATSLEY
Director, Survey Research Service
National Opinion Research Center
University of Chicago

PUBLIC UTILITIES. See ELECTRICAL INDUSTRIES; FEDERAL POWER COMMISSION; RAILROADS; TELEPHONE; URBAN TRANSIT.

PUBLISHING. See BOOK PUBLISHING; MAGAZINES; NEWSPAPERS.

PUERTO RICO

The second governor of Puerto Rico to be elected by the free vote of the people, Roberto Sánchez Vilella, was inaugurated on Jan. 2, 1965. The first such governor, Luis Muñoz Marín (took office Jan. 2, 1949), had served four terms of four years each.

Status Commission. The United States-Puerto Rican

ROBERTO SÁNCHEZ VILELLA took office as governor of Puerto Rico in January 1965. A soft-spoken civil engineer, he was groomed for the governorship by Luis Muñoz Marín, under whom he served as secretary of state from 1952 through 1964. In his first year as governor, Sánchez continued Muñoz' policies of retaining Puerto Rico's commonwealth status and improving its economy through industrial expansion.

Born in Mayagüez, Puerto Rico, on Feb. 19, 1913, Sánchez received a degree in civil engineering from Ohio State University in 1934. He began his political career in Puerto Rico as assistant commissioner of the interior in 1941. He was director of the island's transportation authority from 1942 to 1945, when he became mayor of San Juan. In 1946 he resigned as mayor to serve as special assistant to Muñoz, who was then president of the Senate. Sánchez served in several cabinet posts during Muñoz' governorship, and in 1952 was named secretary of state, a position equivalent to vice governor of the island.

Commission on the status of Puerto Rico, created by Congress in 1964, held a number of public hearings in San Juan during the year. The purpose of the hearings was to give Puerto Rican citizens the opportunity to state their reasons for preferring continued commonwealth status, statehood, or independence as Puerto Rico's ultimate political status.

Caribbean Corporation. During the year the government of Puerto-Rico organized the Caribbean Economic Development Corporation (CODECA) to stimulate trade and the exchange of ideas and technical help throughout the Caribbean area. The earlier Caribbean Organization was liquidated in June 1965.

Industrialization. In 1965 new factories were opened on the island at an average rate of approximately two per week. The number of such plants promoted or aided by the government since 1947 totaled more than 1,200.

PUERTO RICO · Information Highlights

Area: 3,423 square miles.
Population: 2,626,100 (July 1, 1965 est.).
Chief Cities (July 1, 1965 est.): San Juan, the capital (506,000); Bayamón (95,800); Ponce (156,000); Mayagüez (88,200); Caguas (73,300); Arecibo (82,100).
Government: *Chief Officers*—governor, Roberto Sánchez Vilella (Popular Democratic party); secy. of state, Dr. Carlos J. Lastra (PDP); attorney general, Rafael Hernandez Colón (PDP); secy. of treasury, Jorge Font Saldaña (PDP); secy. of education, Angel G. Quintero Alfaro (PDP); chief justice, Luis Negrón Fernandez (PDP). *Legislature*—(convened Jan. 29, 1965); Senate, 32 members (9 Republicans, 23 Popular Democrats); House of Representatives, 64 members (17 R, 47 PDP).
Education: *Total school enrollment* (Jan. 1965)—722,968 (public elementary, 406,333 pupils, 10,043 teachers; public secondary, 212,258 pupils, 6,767 teachers; nonpublic schools, 67,543 pupils, 2,689 teachers; college and university, 1964–65, 36,834 students, 1,940 teachers). *Public school expenditures* (1963–64)—$99,700,000 ($163 per pupil); average teacher's salary, $3,424.
Public Finance (fiscal year 1965): *Revenues,* $436,004,190 (motor fuel tax, $22,778,502; federal funds, $92,933,854). *Expenditures,* $501,000,000 (chiefly education, $138,000,000; health, welfare, and safety, $168,000,000; highways, $37,487,604). *Total Commonwealth debt, $261,500,000* (June 30, 1964).
Personal Income (1964): $2,100,800,000; average annual income per person, $832.
Public Assistance (fiscal year 1965): $15,626,306 to 101,613 persons (aged, $3,147,430; dependent children, $9,892,256).
Labor Force (1965): *Employed persons:* Agriculture, 124,000; nonagriculture (wage and salary earners), 461,000 (18.6% manufacturing, 18.0% trade, 12.6% government). *Unemployed persons,* 84,000.
Manufacturing (1963): Value added by manufacture, $620,815,000 (primary metals, $5,788,000; nonelectric machinery, $7,651,000; electrical machinery, $50,856,000; fabricated metals, $16,753,000; food and products, $189,680,000).
Agriculture (1963–64): *Cash farm income,* $279,282,000 (livestock, $107,043,000; crops, $167,786,000). *Chief crops*—sugarcane, 9,802,224 tons; molasses, 64,382,368 gallons; tobacco, 321,656 cwt.; coffee, 315,000 cwt.
Mining (1965): *Production value,* $41,800,000. *Chief minerals*—cement, 7,800,000 barrels; sand and gravel, 7,800,000 tons; crushed stone, 5,353,000 tons; clay, 250,000 tons; lime, 10,000 tons; salt, 5,000 tons.
Fisheries (1964): *Commercial catch,* 10.5 million pounds.
Transportation: *Roads* (1963), 3,549 miles (3,215 paved); *motor vehicles* (1964), 285,516; *railroads,* none; *airlines* (1965), 12 (6 airports).
Communications (1965): *Telephones,* 181,613; *television stations,* 9; *radio stations,* 52; *newspapers,* 4 (daily circulation in March 1965, 195,430).

The Commonwealth Oil Refining Company added a $45 million petrochemical plant to its refinery near Ponce on Puerto Rico's south coast. The plant will manufacture various products from the refinery's byproducts. Representing a total investment of $150 million, the complex is rated as the largest of its kind in the world.

Copper Development. Puerto Rico, long believed to have no important mineral resources, was electrified in 1965 by the announcement that deposits of copper ore in the interior are large enough to warrant development. Two United States corporations expressed interest in investigating the possibilities of establishing a copper mining and refining industry.

Tourism. The tourist industry continued to grow during the fiscal year 1964–65. Five new hotels and four guest houses were inaugurated. Nonresident guests in San Juan hotels during the year numbered 337,649, as compared with 298,000 in the previous year. Their expenditures in Puerto Rico were estimated at $119.3 million, as against $96.5 million in 1964.

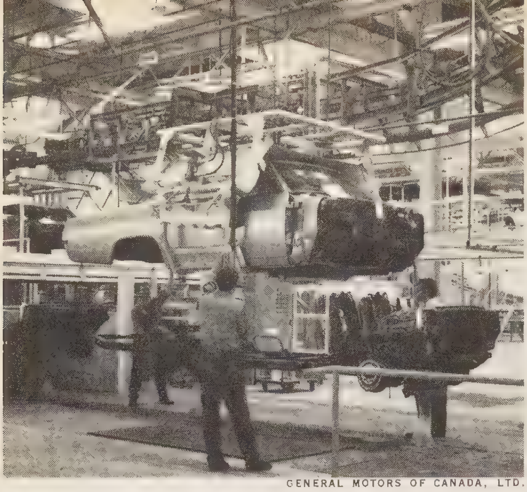
EARL PARKER HANSON
Geographer; Consultant to the Department of State, Commonwealth of Puerto Rico

PULITZER PRIZES. See PRIZES AND AWARDS.
QATAR. See ARABIA.
QUAKERS. See FRIENDS, RELIGIOUS SOCIETY OF.

QUEBEC

Quebec's efforts to achieve an independent role in national and international affairs received a major boost in 1965 when the provincial government signed a cultural cooperation agreement with France. The Canadian government also signed an agreement with France confirming the right of Quebec—and of all other Canadian provinces—to conclude such pacts with the French government. These new ties with France have long been sought by the French Canadians, who feel a spiritual kinship with the French. Late in 1964, Premier Jean Lesage had announced that he and President Charles de Gaulle had discussed an agreement for closer union.

Cultural Exchanges. An initial agreement between Quebec and France, signed on February 26, provided for an exchange of professors, research workers, and students. A more formal agreement on November 24 extended the exchange to include



GENERAL MOTORS OF CANADA, LTD.

QUEBEC'S FIRST AUTOMOTIVE ASSEMBLY PLANT opened officially for production in the city of Ste. Thérèse in 1965.

artists, films, expositions, and television and radio broadcasts. On the same day, with an exchange of letters between Paul Martin, the Canadian secretary of state for external affairs, and François Leduc, the French ambassador to Canada, the provincial pact with France received the federal government's official sanction.

Quebec already had opened an informal provincial cultural embassy, called Quebec House, in Paris, London, and New York. On Oct. 23, 1965, a fourth Quebec House was opened in Milan, Italy, and others were contemplated. In addition, the provincial Department of Health has affiliations with the UN World Health Organization, and the Department of Labour maintains contact with the International Labor Organization.

QUEBEC · Information Highlights

Area: 594,860 square miles.
Population: 5,692,000 (Oct. 1, 1965 est.).
Chief Cities (1961 census): Quebec, the capital (171,979); Montreal (1,191,062); Verdun (78,317); Sherbrooke (66,554); Trois Rivières (53,477); Hull (56,929).
Government: *Chief Officers*—Lieutenant governor, Paul Comtois; premier and min. of finance, Jean Lesage (Liberal); prov. secy., Bona Arsenault (L); atty. gen., Claude Wagner (L); min. of educ., Paul Gérin-Lajoie (L); chief justice, Lucien Tremblay. *Legislature* (convened Jan. 21, 1965)— Legislative Council, 24 members (appointive); Legislative Assembly, 95 members (30 Union Nationale, 62 Liberal, 1 Independent; 2 vacancies).
Education: *School enrollment* (1963–64 est.)—Catholic elementary and secondary, 1,125,500 pupils (48,007 teachers); Protestant, 125,128 (5,736); other religious schools, 13,625 (1,000); private, 106,786 (7,125); Indian, 3,072 (127); college and university, 98,924 students. *School expenditures* (1963)—$450,850,000.
Public Finance (fiscal year 1965 est.): *Revenues*, $1,129,310,000 (sales tax, $487,530,000; income tax, $282,200,000; federal funds, $114,468,000). *Expenditures*, $1,296,310,000 (education, $361,010,000; health and welfare, $347,730,000; transportation and communications, $246,570,000).
Personal Income (1964): $8,945,000,000; average annual income per person, $1,598.
Public Assistance (fiscal year 1965 est.): $136,980,000 (aged and blind, $20,530,000; dependents and unemployed, $58,950,000).
Labor Force (1961 census, agricultural and manufacturing only): *Agricultural*, 132,576; *manufacturing*, 460,087.
Manufacturing (1962): *Value added by manufacture*, $3,658,921,000 (transportation equipment, $204,634,000; primary metals, $257,404,000; nonelectrical machinery, $76,371,000; electrical machinery, $266,243,000; fabricated metals, $225,368,000; food and products, $518,475,000).
Agriculture (1964 est.): *Cash farm income*, $456,635,000 (livestock, $390,970,000; crops, $48,810,000). *Chief crops* (cash receipts)—vegetables, $14,044,000 (ranks 2nd among the provinces); fruits, $9,746,000 (rank, 3rd); potatoes, $6,461,000 (rank, 4th); tobacco, $4,046,000 (rank, 2nd); barley, $24,000 (rank, 6th).
Mining (1964 est.): *Production value*, $671,881,571. *Chief minerals* (tons)—iron ore, 15,417,069 (ranks 1st among the provinces); asbestos, 1,245,442 (rank, 1st); copper, 160,288 (rank, 3rd); zinc, 228,580 (rank, 4th); stone, 32,510,262 (rank, 5th); cement, 2,582,781 (rank, 6th).
Fisheries (1964): *Commercial catch*, 125,726,000 pounds ($5,371,000). *Leading species*—cod, 51,021,000 ($1,805,000); lobster, 3,163,000 ($1,547,000); redfish, 20,142,000 ($556,000); herring, 38,246,000 ($401,000).
Transportation: *Roads* (1962), 54,477 miles (39,574 surfaced); *motor vehicles* (1964), 1,565,952; *railroads* (1963), 5,361 miles; *airlines* (1963), 7 (53 airports).
Communications (1963): *Telephones*, 1,815,331; *television stations*, 15; *radio stations*, 63; *newspapers*, 15 (daily circulation, September 1964, 1,069,057).

Economy. The Quebec economy, which in 1964 achieved a growth rate of 7.4%, maintained a similar rate of expansion in 1965, and this rate was expected to continue at least through the spring of 1966. Capital investments of $4.1 billion accounted for 24.7% of Quebec's share of the gross national product in 1965. Employment was up 5% over 1964, and labor income, which represents more than 68% of total personal income in the province, was up 10%. Shipments of manufactured goods showed a marked increase, and spending for goods and services by Quebekers reached a record figure of $8 billion in 1965.

Provincial Investment Policy. In recent years Quebec has become more aware of its economic strength and has dynamically affirmed itself in the field of economic development. Hydro-Quebec, a government-owned corporation, controls the province's power resources. The General Investment Corporation, also government directed, made an initial investment of $25 million in a $224 million integrated steel center to be built on the south side of the St. Lawrence River, halfway between Montreal and Quebec City. The center will have a first-year capacity of 600,000 tons. The government also has acquired the assets of Volcano Limited, Forano Limited, and Marine Industries Limited. This industrial complex, the largest controlled by French Canadians, has sales totaling over $50 million annually. The Quebec Deposit and Investment Fund, also provincially controlled, was created to channel local funds into development projects.

New Automotive Industry. On Oct. 13, 1965, Quebec's first automobile assembly plant was opened. The new industry, operated by the General Motors Corporation, is located at Ste. Thérèse, near Montreal. The French automotive firm of Peugeot-Renault also located a new plant near Montreal.

The Quebec government welcomed the arrival of these industries to the province, although it would have preferred to have them locate outside the Montreal area, which already has an overconcentration of industry. Through the efforts of the Economic Advisory Council, the government is encouraging other new industries to build in less-crowded sections of the province.

Provincial Cabinet. Four changes in the provincial cabinet were made in October. Eric Kierans, minister of provincial revenue, was moved to the post of minister of health; René Lévesque, minister of natural resources, added the portfolio of minister of family and social welfare to his duties; Richard Hyde was named to the post of minister of provincial revenue; and Dr. Alphonse Couturier, minister of health, became minister of tourism, fish, and game.

Tourist Resorts. Resort areas of Quebec near the city of Montreal are engaged in a major building program in anticipation of the tourist influx for Expo '67. To facilitate easy access to these areas, the Quebec Autoroutes Authority is constructing a system of expressways radiating from Montreal that will bring most of them within an hour's ride of the city.

LIONEL LA BERGE
Director, "Quebec Year Book"

GREAT NORTHERN RAILWAY

PIGGYBACK SHIPMENTS by vans tied to flatcars are growing in efficiency. More than one million piggyback loads were transported by U.S. railroads in 1965. The vans can be refrigerated or warmed to fit the season.

RACE RELATIONS. See CIVIL RIGHTS.
RADIO AND TELEVISION. See TELEVISION AND RADIO.
RAHMAN, Prince Abdul. See biographical sketch under MALAYSIA.

RAILROADS

During 1965, Class I railroads[1] in the United States continued the trend of improved freight traffic volume, operating revenues, and net income. The progress, while modest, was encouraging because all three indicators moved ahead. However, many problems remained, especially for carriers in the East.

Legislation. In 1965, President Johnson proposed to the Congress that "heavier reliance on competition in transportation" was necessary "to keep the economy growing." He said that one step in this direction would be to "revise the traditional government programs of regulation and operating subsidies." Accordingly, he suggested charging users of publicly owned transportation facilities "a greater share of the costs incurred on their behalf." Included in the proposal were user-charge increases for air and highway carriers, and the first user charge ever to be collected from domestic waterway operators. These policies, if put into effect, would move in the direction of competitive equality between railroads and the subsidized carriers. However, no action was taken on these proposals.

A high-speed ground transportation research project—a program authorizing $90 million for research and development—was passed by Congress during 1965. When President Johnson signed the bill, he announced that tests of 125-mile-an-hour passenger trains for the Washington to Boston run were expected to begin in 1966. The other major transport legislation passed in 1965 was the "gray area" bill strengthening the enforcement of regulations against illegal motor carriers.

Mergers. The merger movement among Class I railroads continued. Some mergers were completed, some were blocked, and some were under consideration.

The merger of the Pacific Electric into the Southern Pacific, and the merger of three subsidiaries of the Atchison, Topeka and Santa Fe into the parent corporation, were completed during 1965. The previously approved merger of the Atlantic Coast Line and Seaboard Air Line railroads, which had been challenged, was remanded to a lower court by the U.S. Supreme Court. The effective date of control of the Chicago and Eastern Illinois Railroad by the Missouri Pacific was put off by a court order, though control had been approved by the Interstate Commerce Commission (ICC).

During 1965, ICC examiners recommended approval of the merger of the Pennsylvania and New York Central railroads, and control of the Western Maryland Railway by the Chesapeake and Ohio-Baltimore and Ohio railroads.

The ICC denied separate applications of the Southern Pacific and the Atchison, Topeka and Santa Fe railroads to control the Western Pacific Railroad. This action reversed the examiner's report, which recommended approval of the Atchison, Topeka and Santa Fe proposal.

At the end of the year the ICC was processing the following merger and control proposals involving Class I railroads: the Texas and Pacific and the Missouri Pacific merger; proposals by the Chicago and North Western and the Union Pacific, respectively, to control the Chicago, Rock Island and Pacific; merger of the Great Northern, the Northern Pacific, and the Chicago, Burlington and Quincy, along with the lease of the Spokane, Portland and Seattle Railroad; the merger of the Chicago and North Western and the Chicago Great Western; the merger of the Norfolk and Western, Chesapeake and Ohio, Erie-Lackawanna, Delaware and Hudson, Boston and Maine, Reading, and the Central Railroad of New Jersey; and the merger of the Erie-Lackawanna, Delaware and Hudson, and Boston and Maine into the Norfolk and Western under provisions of the previously consummated Norfolk and Western and New York, Chicago, and St. Louis merger.

Research and Development. Railroads continued to make progress in technical developments and economic research. Cars of greater capacity and economy were added to the fleet—for example, a prototype of a hopper car with a carrying capacity of 260 tons was introduced—and a new generation of more powerful and efficient locomotives appeared.

Unit trains, moving loads of 10,000 or more tons in rapid round-trip service at substantial rate reductions, became more numerous during 1965. It was estimated that 25% of all coal moved by rail is transported by such trains. This type of service is spreading to other commodities.

Railroads continued to introduce modern communication and data-processing procedures. Improved techniques speeded yard operations, and the installation of additional centralized traffic-control systems promoted more efficient use of main-line facilities.

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[1] All data herein refer to Class I railroads only: that is, those grossing over $5 million annually. The number of Class I railroads was reduced from 98 to 77 in 1965, when the minimum limit was raised from $3 million to $5 million. The 1965 data (but not the 1964 figures) reflect this change, especially in the mileage-operated statistics (a decrease of approximately 1.4%). The new group of Class I railroads accounted for 96% of 1965 railroad operating revenues. All data for 1965 are partly estimated.

Rates and Fares. In 1965 there were no general freight rate or passenger fare increases. Following the practice of recent years, railroads made competitive rate adjustments where regulations permitted. In this way, carriers endeavored to increase traffic volume and net income from freight operations and to reduce their large passenger deficit.

Finances. American railroads in 1965 had total operating revenues of $10.1 billion—the first $10 billion year since 1957—for a gain of approximately 3% over 1964. Mainly because of increased wage and fringe benefit costs, however, operating expenses rose by about 1%, to $7.75 billion. Net railway operating income was approximately $925 million, compared with $818 million in 1964. The return on investment was only 3.5%—one of the lowest returns earned by any major U.S. industry.

Freight Traffic. Railroad freight carloadings in 1965 increased 1.5% over 1964, for a total of 29.5 million cars—the first time since 1960 that this figure was attained. Heavier loads per car, longer hauls, and the increased number of carloadings resulted in a 5% growth in ton-miles. In 1965, 690 billion revenue ton-miles were recorded. This figure exceeded the performance of any year since World War II, but it merely matched the output of the year 1945. The latter fact indicated that rail freight traffic has not increased in step with the rapid postwar growth of the American economy in general.

Table 1—FREIGHT TRAFFIC

Year	Revenue ton-miles	% increase over 1939
1939	333,438,000,000	...
1944 (peak war year)	737,246,000,000	121.1
1947	654,728,000,000	96.4
1964	659,327,000,000	97.7
1965 (est., peak peacetime year)	690,000,000,000	107.0

Trailer-on-flatcar (piggyback) loadings increased for the 12th consecutive year. The continuing growth of this service demonstrates the inherent economy of long-haul transport by rail. Piggyback volume in 1965 exceeded 1,000,000 cars for the first time, and was more than 15% greater than in 1964. Shipments of new motor vehicles on multideck rail cars surpassed the record year of 1964, with the railroads hauling over 45% of total shipments in 1965, compared with barely 8% in 1959.

Passenger Traffic. Railroad passenger-miles declined in 1965 for the 14th consecutive year. The annual total was 17.3 billion, or 5% below 1964. With the exception of the depression years of 1932 and 1933, no year since 1900 has recorded such a low level of railroad passenger service. The passenger deficit reached approximately $400 million.

Table 2—PASSENGER TRAFFIC

Year	Passenger-miles	% increase over 1933
1933 (modern record low)	16,341,000,000	...
1944 (peak war year)	95,549,000,000	484.7
1964	18,248,000,000	11.7
1965 (est.)	17,300,000,000	5.9

Facilities. American railroads spent a record $1.6 billion for new plant and equipment in 1965. Of this total, $1.3 billion was spent for equipment and $300 million for new plants and other facilities. At the end of the year, Class I railroads owned or leased approximately 213,000 miles of road, 28,000 locomotives, 1,490,000 freight cars (supplemented by about 300,000 owned by private car lines and other than Class I carriers), and 22,000 passenger-train cars (including those operated by the Pullman Company).

During 1965, approximately 85,000 new and rebuilt cars were added by Class I roads and private car lines, with the former providing more than 83% of the total. Class I railroads also installed 1,500 new diesel locomotive units in 1965—the highest number since 1953.

Employment. Railroad employment declined in 1965 for the 14th consecutive year. The 1965 average employment of 640,000—the lowest figure for the 20th century—was attributable to increased efficiency, continued separation of firemen in accord with the 1964 arbitration award in the dispute on work rules, and the effect of reclassifying 21 former Class I railroads as Class II carriers. Wage and fringe benefit increases and protective provisions for displaced employees again exerted an upward force on railroad expenses.

World Statistics. Statistics on railway traffic in selected countries of the world are provided below in Table 3.

Table 3—WORLD RAILWAY TRAFFIC
BY MAJOR COUNTRIES

(In millions of passenger-kilometers and freight net ton-kilometers; 1 kilometer equals 0.62137 mile)

Country	Passenger-km		Net ton-km	
	1962	1963 (est.)	1962	1963 (est.)
Argentina	12,616	12,074	11,655	10,631
Australia[1]	3,547	3,567	14,368	15,064
Austria[2]	6,440	6,680	7,717	8,057
Belgium[1]	8,959	9,007	6,420	6,780
Brazil[3]	17,471p.	18,063	13,448	15,338
Canada	3,249	3,327	99,186	108,355
China (Communist)[4]	45,670	—	265,260	—
Czechoslovakia	19,769	19,037	52,224	51,662
France[1]	35,770	36,630	61,170	62,990
Germany, East[5]	16,791	16,263	37,404	37,596
Germany, West[2]	38,415	37,736	54,715	59,488
Hungary	13,114	13,180	14,371	15,182
India[6]	84,498	88,000	83,212	92,000
Italy[7]	31,465	32,042	15,836	16,126
Japan	206,764	221,411	57,510	58,100
Korea, South	5,869	6,575	3,742	4,067
Mexico[8]	3,770	3,898	13,521	14,960
Netherlands[9]	7,878	7,911	3,702	4,093
Pakistan[3, 10]	12,543	13,266	8,611	9,643
Poland[3]	31,246	32,139	72,688	74,428
Rumania[3, 11]	12,325	12,836	24,419	26,755
South Africa[6]	—	—	34,139	37,456
Spain[1, 12]	8,789	10,092	6,688	7,153
Sweden	5,353	5,203	11,083	11,912
Switzerland[3, 13]	8,812	7,956	4,907	4,842
Turkey	3,720	3,631	3,494	3,748
USSR[14]	189,300	192,000	1,646,300	1,749,400
United Kingdom[1, 8]	31,749	31,503	26,333	27,041
United States	32,068	29,803	869,815	912,733
Yugoslavia	9,908	10,673	15,033	17,345

Note: Figures in this table relate to the domestic and international traffic on all railway lines of the countries shown, except railways entirely within an urban unit, and plantation, industrial, mining, funicular, and cable railways. The figures relating to passenger-kilometers include all passengers except military, government, and railway personnel when carried without revenue. Data relating to ton-kilometers are freight net ton-kilometers, including both fast and ordinary goods services, but excluding service traffic, mail, baggage, and nonrevenue governmental stores.

[1] Government railways only. [2] Federal railways only. [3] Includes service traffic in net ton-kilometers. [4] 1959 figures; may include service traffic. [5] Includes service traffic and excludes light railways in net ton-kilometers. [6] 12-month period, beginning April 1. [7] Excludes livestock in net ton-kilometers. [8] Includes government traffic in net ton-kilometers. [9] Excludes express parcels in net ton-kilometers. [10] 12-month period, beginning July 1. [11] Includes military and government traffic in passenger-kilometers and mail and passengers' baggage in net ton-kilometers. [12] Excludes suburban railways in passenger-kilometers and includes mail and weight of mail cars in net ton-kilometers. [13] Includes mail and passengers' baggage in net ton-kilometers. [14] May include service traffic. p.—preliminary.

Source: *Statistical Yearbook, 1964,* Statistical Office of the United Nations (New York 1965).

BURTON N. BEHLING
Vice-President
Association of American Railroads

REAPPORTIONMENT AND REDISTRICTING

Almost every state was involved with some aspect of reapportionment or redistricting during 1965. The U.S. Supreme Court had ruled in 1964 that congressional districts must be as nearly equal in number of inhabitants as is practicable (*Wesberry* v. *Sanders,* Feb. 17, 1964), and that both houses of a state legislature must be apportioned on the basis of population (*Reynolds* v. *Sims,* June 15, 1964). A few states complied with court orders to redistrict in time for the 1964 election, but most legislatures tackled the problem in their 1965 sessions.

Efforts to Comply With Court Rulings. At the time of the *Reynolds* decision, four states—Kentucky, Massachusetts, Oregon, and West Virginia—already had state legislative apportionments essentially in conformity with the "one man-one vote" doctrine. Five other states—Colorado, Delaware, Michigan, Oklahoma, and Wisconsin—used new population-based apportionment in the 1964 election.

During 1965, Georgia, New York, and Vermont conducted special legislative elections under new apportionments. Population-based districts also went into effect in the regular 1965 legislative elections in New Jersey and Virginia. By the end of the year, 34 states had adopted new plans and eight others were under court orders to institute new apportionments in time for the November 1966 elections. Cases were still pending in two states. In many instances, states that had completed reapportionment were required to do so again in order to meet objections raised in subsequent litigation.

As of Jan. 1, 1966, 20 states had redrawn their congressional district lines and three more were under orders to do so. Representative Emanuel Celler (D, N.Y.), introduced a bill in 1965 to require all states having two or more representatives in Congress to create districts that are within 15% of the statewide average in population size. Celler's bill contained a requirement that the districts be composed of compact and contiguous territory. Until 1929 a similar law had been in effect, although it did not specify the permissible amount of variation in population. The Celler bill passed the House in 1965, but the Senate did not act.

Reapportionment of Local Government Units. Another type of reapportionment action accelerated during 1965 as a result of court rulings on local government boards or councils. All counties in California and Wisconsin were required to realign their districts for the county boards of supervisors, and similar rulings were made for individual counties in several states, including Michigan, New York, and South Dakota.

Court decisions also affected some cities. Baltimore and Cleveland were obliged to adjust city council district lines, and court challenges were instituted in New York and other cities. As of Jan. 1, 1966, the Supreme Court had made no ruling on local government issues except for dismissal, on Oct. 11, 1965, on procedural grounds, of an appeal from a federal district court decision involving Suffolk County, New York (*Griffing* v. *Bianchi*).

Constitutional Amendment Proposed. Opposition to the sweeping changes brought about by the Supreme Court rulings on state legislatures resulted in drives, both in Congress and in the state legislatures, for a national constitutional amendment.

Senator Everett M. Dirksen (R, Ill.) introduced an amendment that would permit any state to apportion one house of a bicameral (two-house) legislature on factors other than population. The nation's only unicameral (single-house) state legislature, in Nebraska, would be permitted to use factors other than population in its apportionment. On Aug. 4, 1965, the proposed amendment was supported by the Senate, 57 to 39, but fell short of the necessary two-thirds majority.

State legislatures sought to use another method to amend the U.S. Constitution by calling a national constitutional convention. This procedure has never been successfully used. Under the procedure, two thirds (34) of the states must petition Congress for a convention, and Congress must pass a call for a convention, by a majority vote. Any action of the national constitutional convention must be ratified by three fourths of the states. Since this procedure has never been successful, constitutional authorities have disagreed over the many technicalities involved, even the determination as to which states have passed valid resolutions and submitted petitions to Congress. There does appear to be agreement, however, that during 1965, 26 states passed resolutions calling for a constitutional convention, that four other states petitioned Congress to pass the Dirksen amendment, and that 20 states either defeated all antireapportionment resolutions or deliberately failed to act on them.

Apportionments Upheld by Court. Although many appeals from lower court rulings came before the U.S. Supreme Court in 1965, little refinement of the population doctrine emerged. The court did approve a system adopted by Georgia in which some members of the state Senate are elected from multimember districts and others from single-member districts. The original plaintiffs in the case (*Fortson* v. *Dorsey*) had contended that the system was discriminatory. The court held that under the particular circumstances of the Georgia case, the state's plan was valid. However, the court left open the question of whether such mixed systems would be upheld in the future. Similarly, the Supreme Court sanctioned the use of a combination district in Virginia in which the city of Richmond and the county of Henrico will elect several legislators at large from the combined Richmond-Henrico areas (*Burnette* v. *Davis* and *Thornton* v. *Davis*).

The reapportionment decisions of the Supreme Court have been based on the clause in the 14th Amendment that guarantees each citizen "the equal protection of the law." On Oct. 25, 1965, the Supreme Court dismissed a contention by Kansas that the amendment had not been validly adopted.

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RECORDINGS

In classical music, an important development in 1965 was the success of budget-priced records. During the year a new popular music—"folk-rock"—emerged, and the jazz world welcomed the return from obscurity of the great Earl "Fatha" Hines. This article reviews the outstanding developments of the year under the following headings: (1) Classical Records; (2) Popular Records; (3) Jazz Records.

CLASSICAL RECORDS

The importance to the record industry of budget-priced records increased in 1965, with Nonesuch, a division of Elektra Records, emerging as the budget record leader. Although it introduced its first records in the spring of 1964, Nonesuch did not

WHITESTONE PHOTO

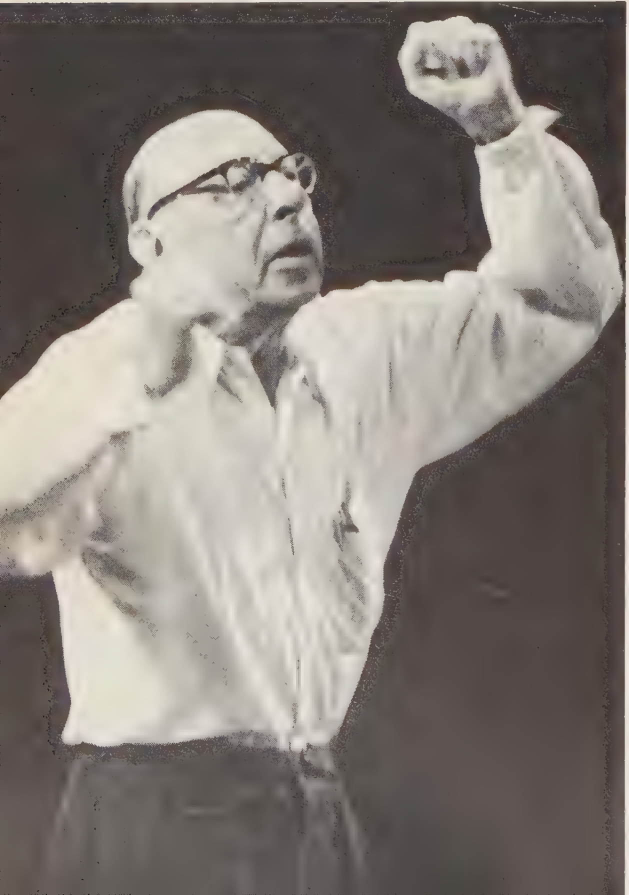
LEOPOLD STOKOWSKI (right) and assistant conductors discuss problems of recording Charles Ives' Fourth Symphony.

really make its impact felt until 1965, when the company sold more than a million discs.

There were several reasons for this success. One was the company's choice of a currently popular repertoire consisting largely of baroque music, especially the works of Telemann, Vivaldi, and their contemporaries. Another was the attractive presentation of their product, featuring eye-catching cartoon-drawn covers and extremely well-written program notes. And a third was the low price ($2.50 per disc for either mono or stereo records). Like a number of other budget labels—Turnabout, Music Guild, Musical Heritage, Vanguard Everyman—Nonesuch drew from a great many small European record companies with no direct distribution in the United States. This practice completely eliminated costly recording expenses and made it possible to cut the cost of record production by more than half.

COMPOSER-CONDUCTOR IGOR STRAVINSKY, shown during a rehearsal in London's Festival Hall, conducted a number of his own works for Columbia Records in 1965.

UPI



Live Recordings. Perhaps the most exciting of the live recordings made in 1965 was Columbia Records' presentation of the historic return of pianist Vladimir Horowitz to the concert platform on May 9. Another important musical event of 1965 was the world premiere of Charles Ives' reconstructed Fourth Symphony, and although the work was not recorded live, Columbia did tape the symphony a few days later with the original performers, the American Symphony Orchestra under Leopold Stokowski. (See MUSIC.)

Deutsche Grammophon's well-received recordings of the stage performances at Munich's Nationaltheater of Richard Strauss' *Arabella* and *Die Frau ohne Schatten,* which were brought out in 1964, prompted Deutsche Grammophon to lease the same composer's *Daphne,* recorded at Vienna's Theater an der Wien during the 1964 Vienna Festival. Philips Records released two Wagner operas—*Parsifal* and *Tannhäuser*—recorded live at the 1962 Bayreuth Festival.

Modern Music. Contemporary composers were well represented by 1965 recordings. Columbia continued its Stravinsky series by releasing a half-dozen discs with the 83-year-old composer conducting his own music. Columbia also announced its intention to record virtually all the works of Aaron Copland, with the composer appearing either as conductor or piano soloist. London Records (British Decca), performing a similar service for Benjamin Britten, in 1965 added Britten's recordings of a number of his own compositions, including the opera *Albert Herring.* Columbia released the third volume in Robert Craft's investigation into Arnold Schönberg's music, and RCA Victor continued its Prokofiev project with the Boston Symphony Orchestra under Erich Leinsdorf. RCA also announced its intention to add to its catalog of contemporary music.

The "Ring" Cycle. The first recording of Wagner's gigantic *Ring* cycle as an integrated unit came one opera nearer to completion in 1965 when London-Decca released its recording of *Die Götterdämmerung,* made in Vienna. Georg Solti conducted the Vienna Philharmonic Orchestra, and an impressive array of the most noted Wagnerian artists performed the roles. The future of similarly ambitious large-scale recording projects may hang on the success or failure of this one.

Other Classical Releases. Following is a sampling of notable classical record releases in 1965, in addition to those already mentioned. All are available in both stereophonic and monophonic versions.

Bach, *Brandenburg Concertos* (6); Suites for Orchestra No. 2 in B minor, No. 3 in D: Berlin Philharmonic Orchestra, Herbert von Karajan, conductor (Deutsche Grammophon, 3 discs).

Bach, *Christmas Oratorio:* Gundula Janowitz, Christa Ludwig, Fritz Wunderlich, and Franz Crass, soloists; Munich Bach Choir and Orchestra, Karl Richter, conductor (Archive, 3 discs).

Beethoven, Sonatas for Piano, Op. 10 (complete): Glenn Gould, piano (Columbia).

Berg, *Wozzeck:* Evelyn Lear, Dietrich Fischer-Dieskau, and other soloists; Chorus and Orchestra of the Deutsche Oper (Berlin), Karl Böhm, conductor (Deutsche Grammophon, 2 discs).

Berlioz, *Requiem,* Op. 5: Cesare Valletti, tenor; Temple University Choirs; Philadelphia Orchestra, Eugene Ormandy, conductor (Columbia, 2 discs).

Bernstein, *Chichester Psalms:* Camerata Singers; New York Philharmonic, Leonard Bernstein, conductor (Columbia).
Bizet, *Carmen:* Maria Callas, Nicolai Gedda, and other soloists; Choeurs René Duclos, Orchestre du Théâtre National de l'Opéra (Paris), Georges Prêtre, conductor (Angel, 3 discs).
Brahms, Concerto for Piano and Orchestra No. 2 in B flat, Op. 83: Eugene Istomin, piano; Philadelphia Orchestra, Eugene Ormandy, conductor (Columbia).
Brahms, Quintet in B minor: Gervase de Peyer, clarinet; Emanuel Hurwitz and Ivor McMahon, violins; Cecil Aronowitz, viola; Terence Weil, cello (Angel).
Brahms, *German Requiem,* Op. 45: Gundula Janowitz and Eberhard Wächter, soloists; Wiener Singverein; Berlin Philharmonic Orchestra, Herbert von Karajan, conductor (Deutsche Grammophon, 2 discs).
Britten, Symphony for Cello and Orchestra, Op. 68: Mstislav Rostropovich, cello; English Chamber Orchestra, Benjamin Britten, conductor (London).
Britten, *Cantata Misericordium:* Peter Pears and Dietrich Fischer-Dieskau, soloists; London Symphony Orchestra and Chorus, Benjamin Britten, conductor (London).
Chopin, Ballades: Vladimir Ashkenazy, piano (London).
Copland, *A Lincoln Portrait:* Adlai Stevenson, narrator; Philadelphia Orchestra, Eugene Ormandy, conductor (Columbia).
Debussy, *Pelléas et Mélisande:* Erna Spoorenberg, Camille Maurane, George London, and other soloists; L'Orchestre de la Suisse Romande, Ernest Ansermet, conductor (London, 3 discs).
Diamond, Quartet No. 4: Beaux-Arts String Quartet (Epic).
Dvořák, *Slavonic Dances* (Op. 46, 72): Cleveland Orchestra, George Szell, conductor (Columbia).
Dvořák, *Rusalka:* Soloists, Chorus, and Orchestra of the Prague National Theater, Zdenek Chalabala, conductor (Artia).
Dvořák, Quintet for Strings in E flat, Op. 97: European String Quartet (Westminster).
French and Russian Arias: Nicolai Ghiaurov; London Symphony Orchestra, Edward Downes, conductor (London).
Gounod, *Messe solennelle à Sainte-Cécile:* Pilar Lorengar, Heinz Hoppe, and Franz Crass, soloists; Choeurs René Duclos, Orchestre de la Société des Concerts du Conservatoire de Paris, Jean-Claude Hartemann, conductor (Angel).
Haydn, Quartets for Strings, Op. 1, 20, 33: Dekany Quartet (Vox, 6 discs).
Haydn, Symphonies Nos. 57 in D and 86 in D: Cincinnati Symphony Orchestra, Max Rudolf, conductor (Decca).
Janáček, *Glagolitic Mass:* Evelyn Lear, Hilde Rössl-Majdan, Ernst Häfliger, Franz Crass, and other soloists; Chorus and Orchestra of the Bavarian Radio, Rafael Kubelik, conductor (Deutsche Grammophon).
Mahler, Symphony No. 9 in D minor: Berlin Philharmonic Orchestra, Sir John Barbirolli, conductor (Angel, 2 discs).
Mozart, Concertos Nos. 21 in C (K. 467) and 24 in C minor (K. 491): Robert Casadesus, piano; Cleveland Orchestra, George Szell, conductor (Columbia).
Mozart, Concertos (K. 412, K. 417, K. 447, K. 495): Mason Jones, French horn; Philadelphia Orchestra, Eugene Ormandy, conductor (Columbia).
Mozart, Symphonies Nos. 35, 36, 38, 39, 40, 41: Philharmonia Orchestra, Otto Klemperer, conductor (Angel, 3 discs).
Mozart, *Die Zauberflöte:* Evelyn Lear, Roberta Peters, Fritz Wunderlich, Dietrich Fischer-Dieskau, Franz Crass, and other soloists; RIAS Chamber Chorus; Berlin Philharmonic Orchestra, Karl Böhm, conductor (Deutsche Grammophon, 2 discs).
Pergolesi, *Stabat Mater:* Judith Raskin and Maureen Lehane, soloists; Orchestra Rossini di Napoli, Franco Caracciolo, conductor (London).
Ravel, Concertos for Piano and Orchestra (in D, for the left hand, and in G): Monique Haas, piano; Orchestre National de Paris, Paul Paray, conductor (Deutsche Grammophon).
Rimski-Korsakov, *Scheherazade,* Op. 35: Erich Gruenberg, violin; London Symphony Orchestra, Leopold Stokowski, conductor (London).
Scarlatti, 12 Sonatas for Piano: Vladimir Horowitz, piano (Columbia).
Schönberg, *Gurrelieder:* Inge Borkh, Herbert Schachtsschneider, and other soloists; Chorus and Orchestra of the Bavarian Radio, Rafael Kubelik, conductor (Deutsche Grammophon, 2 discs).
Schubert, Octet in F, Op. 166: Berlin Philharmonic Octet (Deutsche Grammophon).
Schubert, Sonata for Piano No. 17 in D, Op. 53 (D. 850): Clifford Curzon, piano (London).
Schumann, *Noveletten:* Beveridge Webster, piano (Dover).
Sibelius, Symphony No. 5 in E flat, Op. 82: Berlin Philharmonic Orchestra, Herbert von Karajan, conductor (Deutsche Grammophon).
Stravinsky, *The Rake's Progress:* Judith Raskin, Alexander Young, John Reardon, and other soloists; Sadler's Wells Opera Chorus; Royal Philharmonic Orchestra, Igor Stravinsky, conductor (Columbia, 3 discs).
Twenty Songs from "Carmina Burana": Soloists and Ensemble of Ancient Instruments (Telefunken).

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POPULAR RECORDS

The popular record industry in the United States fought its own "battle of Britain" in 1965 and won a draw. Although British groups such as The Beatles, The Rolling Stones, Herman's Hermits, and the Dave Clark Five continued to enjoy huge popularity among teenagers in the United States, young people also began to get the "message" in songs written and sung by new American composers and performers. They included Bob Dylan, Sonny & Cher, Barry McGuire, The Byrds, Changin' Times, Jody Miller, and The Spokesmen.

Folk-Rock. The emergence of "folk-rock"—a mixture of folk music, protest songs, and urban blues with the rock 'n' roll beat—broke the preminence that Britain's singing groups had enjoyed in the American record market in 1964.

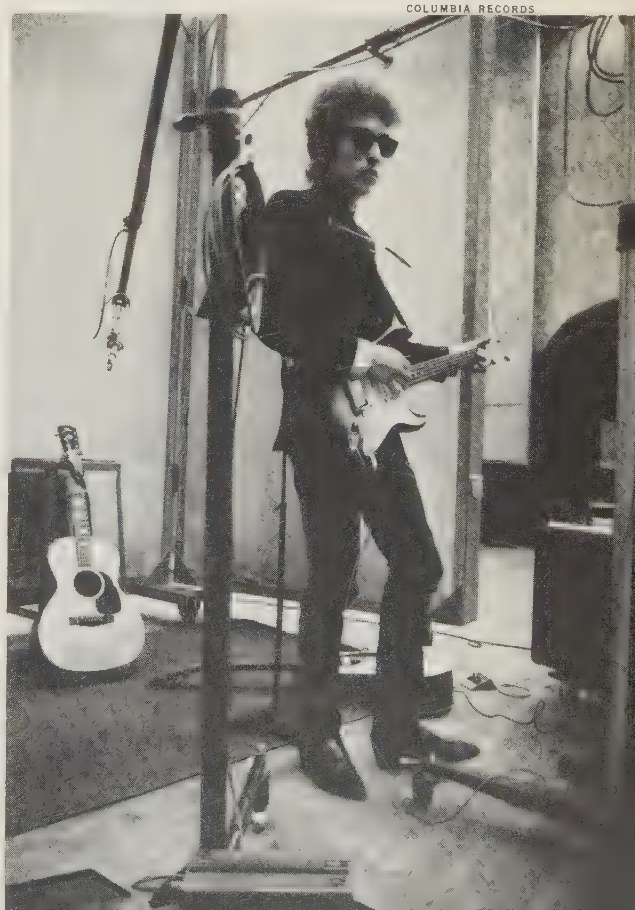
Much of the folk-rock music railed at the so-called Establishment, the potential horrors of the atomic age (*Eve of Destruction*), and Negro discrimination (*Selma, Alabama*), or joined the anti-protest movement (*Hello, Vietnam*). These songs were in effect lyrical editorials on current events.

Other Popular Music. Many of the industry's best sellers continued to be supplied by the perennial stars of the pop field—The Supremes, The Beach Boys, Frank Sinatra, and Elvis Presley. Then, toward midyear, Herb Alpert introduced his Tijuana Brass, an amalgamation of Dixieland Jazz and Mexican Mariachi, which was dubbed Ameriachi. There was also a tremendous upsurge in the popularity of country music, highlighted by the success of singer-composer Roger Miller.

Show Music. Broadway and Hollywood contributed mightily to the industry's overall sales volume, which promised to hit an all-time high of more than $600 million in retail sales. Best-sellng soundtrack

FOLK SINGER BOB DYLAN, one of 1965's most popular recording artists, composes and sings his own "message" and "folk-rock" songs in recording session at Columbia Records.

COLUMBIA RECORDS



and original-cast albums included *Mary Poppins, The Sound of Music, My Fair Lady, Hello, Dolly!, Goldfinger,* and *Fiddler on the Roof.*

Gold Record Award. The Record Industry Association of America in 1965 certified 11 single records and 36 long-playing albums for Gold Record Awards, the highest total since the awards certification program was inaugurated in 1958. To qualify for an RIAA certification, a single must have sold at least a million units, and an album must have accounted for at least $1 million in factory billing.

Among the best-selling single records in 1965 were the following: *Satisfaction,* Rolling Stones (London); *You Lost that Lovin' Feelin',* Righteous Brothers (Philles); *Downtown,* Petula Clark (Warner Brothers); *Can't You Hear my Heartbeat?,* Herman's Hermits (MGM); and *Help!,* The Beatles (Capitol).

Best-selling albums included *Beatles' 65* (Capitol); *Dear Heart,* Andy Williams (Columbia); *Introducing Herman's Hermits* (MGM); and *Beatles VI* (Capitol).

Popular Favorites. The 1965 results of the annual public poll by *Down Beat,* a jazz magazine, of favorite performers, and the listing by *Billboard,* a trade newspaper, of the top ten artists of singles and albums, were as follows:

Down Beat

Male vocalist—Frank Sinatra (Reprise)
Female vocalist—Ella Fitzgerald (Verve)
Vocal group—Double Six of Paris (Philips)
Big jazz band—Duke Ellington (Reprise)
Big dance band—Count Basie (Reprise, Verve)
Jazz combo—Dave Brubeck (Columbia)
Hall of fame—John Coltrane (Impulse)

Billboard

Single Records	*Albums*
Herman's Hermits	Beatles
Beatles	Nat King Cole
Righteous Brothers	Beach Boys
Sonny & Cher	Barbra Streisand
Supremes	Herman's Hermits
Elvis Presley	Al Hirt
Gary Lewis & the Playboys	Andy Williams
Dave Clark Five	Peter, Paul & Mary
Rolling Stones	Frank Sinatra
Beach Boys	Mantovani

HENRY BRIEF
Executive Secretary, Record Industry Association of America, Inc.

JAZZ RECORDS

The newest jazz, the oldest jazz, and the emergence from years of obscurity of one of the formative giants of jazz provided the highlights in jazz recording during 1965.

Earl Hines. The resurgent figure was Earl ("Fatha") Hines, who in the 1920's had been credited with bringing the piano into the mainstream of jazz development. Hines' playing was based not on ragtime, the source of most jazz pianists of that period, but on the solo styles of men who played wind instruments, particularly Louis Armstrong. During the 1930's and 1940's, Hines led one of the outstanding big jazz bands. After 1951 he lived on the west coast, playing with small Dixieland groups, rarely recording, and gradually disappearing into the mists of the past.

Then, in March 1964, Hines was flown to New York to give a concert—the first concert of his own that he had ever given. Critical and audience reactions verged on the ecstatic, and the result was a series of recordings that began to flood into the stores in 1965. The discs, which comprised a survey of the Hines style in a variety of circumstances, included a taping of part of Hines' New York concert, *The Real Earl Hines* (Focus); a set of unaccompanied solos recorded the same weekend as the concert, *Spontaneous Explorations* (Contact); studio recordings by the trio with which he played the concert, *"Fatha"* (Columbia); and such other recordings as *Up to Date* (RCA Victor), *Grand Reunion* (Limelight), and *The Grand Terrace Band* (RCA Victor, reissue).

Avant-Garde. Exponents of avant-garde jazz began to make more records in 1965, thanks largely to the establishment of a recording company devoted to their work—ESP-Disk. During the year, this label released performances by such experimental jazz musicians as Albert Ayler, Giuseppi Logan, Paul Bley, the New York Art Quartet, and Bob James. Previously only Ornette Coleman and Cecil Taylor, among avant-gardists, had been heard on nonspecialist labels, but in 1965 Fantasy released performances by Ayler that had been recorded originally for a Danish radio program. Archie Shepp, a tenor saxophonist, made two discs for Impulse—*Four for Trane* and *Fire Music.*

Traditionalists. There were also unusual stirrings at the other end of the jazz spectrum. Jazz traditionalists, playing repertoires largely developed during the first three decades of the 20th century, appeared on an increasing number of specialist labels of their own. Among the traditionalists were the *Hall Brothers Jazz Band* (GHB); *Jazzology Poll Winners* (Jazz Crusade); the *Happy Jazz Band* (Happy Jazz); *Sweet Emma Barrett* (Preservation Hall); the *El Dorado Jazz Band* (Epitaph); *Tony Parenti's Downtown Boys* (Jazzology); *Crawford-Ferguson Night Owls* (New Orleans Originals); and *Bob Havens* (Southland).

Other Jazz Releases. Other 1965 jazz releases of special interest included:

George Barnes and Carl Kress, *Guitars, Anyone* (Carney 202).
Ray Charles, *Live in Concert* (ABC-Paramount 500; stereo S-500).
Eric Dolphy, *Memorial Album* (Vee Jay 2503).
Friedrich Gulda, *From Vienna with Jazz* (Columbia CL 2251; stereo CS 9051).
Paul Horn Quintet, *Cycles* (RCA Victor LPM 3386; stereo LSP 3386).
Thelonious Monk, *Monk* (Columbia CL 2291; stereo CS 9091).
Oz Smith, *Wizardry* (Capitol 2288; stereo S-2288).
Clark Terry—Bob Brookmeyer, *Tonight* (Mainstream 56043; stereo 6043); *The Power of Positive Swinging* (Mainstream 56054; stereo 6054).

The year's reissues included:

Chu Berry, *Sittin' In* (Mainstream 56038).
Benny Goodman, *B.G., The Small Groups* (RCA Victor LPV 521).
Coleman Hawkins, *Meditations* (Mainstream 56037).
Coleman Hawkins and Lester Young, *Classic Tenors* (Contact 3).
Shelly Manne, *And Company* (Contact 4).
Jelly Roll Morton, *Jelly Roll Morton* (Mainstream 56020); *Stomps and Joys* (RCA Victor LPV 508).
Pee Wee Russell, *A Legend* (Mainstream 56026).
Tenor Hierarchy (Mainstream 56019).
Town Hall Concert, Vol. 2 (Mainstream 56018).

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REFUGEES

Official definitions of a "refugee" vary, and any count of refugees depends on the application of that term. For the United Nations High Commission for Refugees, the principal international agency concerned with resettling displaced persons, refugees are only those persons whom the agency is charged with helping under its limited mandate. These are persons "who, owing to a well-founded fear of persecution for reasons of race, religion, nationality, or political opinion, are outside their country of origin and cannot, or, owing to such fear, do not wish to avail themselves of the protection of that country." The U.S. Committee for Refugees, however, which compiles data from international, governmental, and voluntary agencies, extends its definition to include not only the formal status of displaced persons, but also their well-being.

Refugees numbered some 9.8 million in 1965--an increase of about 1.9 million over the 1964 figure. The increase was due partly to broader coverage, but even the 1965 figure manifestly does not include all persons forced to flee their homes and not fully established elsewhere.

Cuba. The greatest potential surge in the refugee movement is from Cuba. (From the beginning of 1959, a total of 335,000 persons, or nearly 5% of Cuba's population; had gone into exile to escape Communist rule. In mid-1965, they included approximately 190,000 Cubans living in the United States, about 13,800 in Spain, and some 26,000 in various Latin American countries.) On Sept. 28, 1965, Cuban Premier Fidel Castro announced a new policy, whereby Cubans with relatives in the United States could join them. During October, more than 3,000 persons left Cuba by boat, not waiting for the more orderly airlift that began in December. Males aged 15 through 26 were forbidden to leave, and physicians and skilled technicians were subject to delays. If the program develops as projected, informed sources estimated that from 3,000 to 4,000 Cubans would depart monthly, up to an estimated total of 250,000. (See also CUBA; IMMIGRATION.)

WIDE WORLD PHOTOS

CUBAN REFUGEES arrive in Miami, Fla., on the first plane of the U.S. airlift which began on Dec. 1, 1965.

Vietnam. After the Geneva agreements partitioned Vietnam in 1954, almost one million refugees fled into South Vietnam from the Communist regime in the north. Progress was made in resettling these refugees, but with the increased tempo of the war in 1965, the number of refugees increased rapidly. In mid-1965, some 380,000 persons listed officially as refugees were eligible for aid from the U.S. government, the Agency for International Development (AID), or the many American voluntary agencies operating in South Vietnam.

Africa. Perhaps the most pressing refugee problem in 1965 was in sub-Sahara Africa, where a total of some 700,000 displaced persons have not been fully integrated in their new locality. The refugees fled the Congo (Léopoldville) because of political strife, the Sudan because of conflict between Muslims and non-Muslims, Rwanda because of tribal wars, and the three Portuguese colonies of Angola, Mozambique, and Portuguese Guinea because of the rebel movements operating there. The countries that have accepted substantial numbers of refugees include Burundi, the Central African Republic, Senegal, Tanzania, and Uganda.

Southeast Asia. Tibetan refugees in India (42,000), Nepal (8,000), and Sikkim and Bhutan (9,000) continued to receive assistance from various agencies in 1965. The Indian-Pakistani dispute over Kashmir intensified communal hostilities, and some 60,000 persons fled the war zone in Kashmir, adding 250,000 to the approximately 2 million refugees already in East Pakistan.

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SOUTH VIETNAMESE VILLAGERS, escorted by U.S. Marines, evacuate the village of An Hoa on July 9 to escape an attack by Vietcong guerrillas.

WIDE WORLD PHOTOS

RELIGION

This article sums up a history-making year in the annals of the world's religious bodies, under the following headings: (1) A General Survey; (2) Protestantism; (3) Roman Catholicism; (4) Judaism; (5) Eastern Orthodoxy; (6) Islam; and (7) Oriental Religions. A table of membership of major U.S. churches is also included. A number of churches of the United States and Canada are treated in separate articles. See, for example, BAPTIST CHURCHES; EPISCOPAL CHURCH.

A GENERAL SURVEY

Religious bodies of the world in 1965 intensified their efforts to come to grips constructively with the secularization of world culture. Most religions were concerned with reappraising the meaning and relevance of classical beliefs and institutions, and many groups adopted changes in their ideology and organization. At the same time, many religious groups were actively involved in social and political conflict.

Adjustment to the Modern World. Studies presented at the 11th annual congress of the International Association for the History of Religions, which met at Claremont, Calif., in September, revealed widespread interest among scholars of Asian religions in assessing the significance of major concepts and practices of Eastern faiths in the light of scientific historical research and contemporary intellectual change. In various conferences and publications, younger Protestant theologians radically questioned the continuing relevance of many ideas traditionally considered basic to the Christian faith. And in sessions of the Ecumenical Council Vatican II in Rome, liberal theologians expressed dissatisfaction with some of the reformulations of faith and practice emerging from that body. In most religions, laymen were challenged to take a greater part in religious affairs.

Involvement in Politics. In Japan the Komeito party, the political arm of the Soka Gakkai, a laymen's organization of the Nichiren Buddhist sect, emerged as the country's political "third force." While its aims are not yet fully clarified, it seeks to combine communal religious loyalty with social reform. Renewed interest in the traditional Shinto faith was also evident.

Hindus and Muslims of India and Pakistan came to new religious self-consciousness as a result of the military conflict between these two countries over Kashmir. Leaders of both groups affirmed peace and brotherhood as goals of their traditions, but claimed that extraneous forces had led followers of the opposing tradition to thwart those aims.

In the United States, churches and churchmen continued to play a significant role in the civil rights struggle. In February, 2,000 educational, cultural, and political leaders from many countries gathered in New York for a discussion of ethical and religious principles in relation to political life, centering on the views expressed by the late Pope John XXIII in the encyclical *Pacem in Terris*.

Interfaith Cooperation. These ideological and political developments were accompanied by new approaches to interfaith understanding and cooperation. The Central Committee of the World Council of Churches, meeting in Nigeria in January, voted to establish a joint working committee with the Vatican to identify areas of cooperation. In July

ECUMENICAL COUNCIL VATICAN II, in plenary session at St. Peter's Basilica in Rome, opens on September 14 with a Mass celebrated by Pope Paul VI and 24 cardinals.

KEYSTONE

the World Council sponsored a consultation at Boissey, Switzerland, of Jewish and Christian spokesmen, to explore areas of common concern and to reach a better understanding of points of difference between the two faiths. The Lutheran World Federation also approved plans to establish a joint working group with the Roman Catholic Church to review problems of mutual concern.

Of central importance for the discussion of religious liberty and interfaith relations was the approval by the Second Vatican Council of a declaration affirming that no man should be forced to act against his conscience, and stating that nations should neither impose religion nor prohibit freedom of religious belief and association. The Council also specifically condemned anti-Semitism and commended appreciation of other religious faiths.

The Pope's Visit to America. The most dramatic symbol of the renewed concern of the Roman Catholic Church—and, indirectly, of the concern of many religious bodies—for the affairs of the world, was the visit of Pope Paul VI to the United Nations in New York on October 4. Having visited Palestine and India in 1964, he became the first pontiff in history to visit the Western Hemisphere. Pope Paul brought to the United Nations, at the invitation of Secretary General U Thant, an eloquent plea for peace, and for the translation of man's spiritual aspirations into world order and civilization. He also met with President Johnson and with representatives of various religious faiths, and offered a Mass for Peace before some 90,000 persons at Yankee Stadium.

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PROTESTANTISM

Protestantism in 1965 lost two of its theological giants through natural death: Albert Schweitzer and Paul Tillich. Two lesser-known men, the Rev. James J. Reeb and Jonathan M. Daniels, a young seminarian, were killed while participating in the struggle for Negro voting rights and equal employment opportunities in the South.

Social Awareness. The Sixth World Order Conference, sponsored by the International Affairs Commission of the National Council of Churches, met in St. Louis, October 20–23. The theme of the conference was "Man Amid World Change: Christian Imperatives."

Ministry. The recruitment, education, and ordination of ministers continued to be a major concern of Protestants. The controversial movement toward the ordination of women pastors gained momentum when, in May, Dr. Rachel Henderlite became the first woman to be ordained a minister of the Presbyterian Church, U.S. (Southern). Also, as professor-elect of Christian education at the Austin (Texas) Theological Seminary, she became the first woman professor in a major Presbyterian seminary. Similar official actions to include women in the full ministry of the church were taken by the French Reformed Church and the Church of Scotland, the latter having approved the admission of women to the eldership.

Financial and recruitment problems continued to hamper ministerial education. The announcement that the historic Oberlin (Ohio) School of Theology would close by 1968 indicated how serious those problems had become.

Denominational Assemblies. Many of the churches met in denominational conclaves to effect policies and strategies. The 177th General Assembly of the

POPE PAUL VI (l.) presents Brief of Reconciliation to Metropolitan Heliopolis of the Eastern Orthodox Church on December 8, marking a new accord between the two churches.

UPI

United Presbyterian Church in the U.S.A. took the first step toward adopting a new confessional statement of faith. The "Confession of 1967," representing this church's attempt to broaden its doctrinal basis and state its beliefs in contemporary language, proposes the first major change in the Presbyterian position in the 320 years since the adoption of the Westminster Confession in 1647.

At its triennial session, the Lutheran Church-Missouri Synod broke down its traditional wall of isolation and voted to join three other major Lutheran churches in the formation of the Lutheran Council in the U.S.A. This agency brings together 95% of American Lutherans in a program of cooperative study and witness.

In Miami, the World Baptist Alliance, composed of 15,000 delegates from 80 countries, elected as president Dr. William R. Tolbert, Jr., a Negro from Liberia.

Ecumenical Relations. The Central Committee, the 100-member policy-making body of the World Council of Churches, met in January in Enugu, Nigeria. The WCC received five churches into membership, increasing its family to 214 Protestant and Orthodox churches. It agreed to set up a 14-member group to work with the Roman Catholic Church in exploring the possibilities of greater mutual understanding and cooperation.

Throughout the Protestant world, 39 negotiations toward church union were at varying stages of progress. They involved 100 churches in 29 countries and all continents, except Antarctica. In the United States, the Consultation on Church Union, which involves one third of the country's Protestants, held its 4th plenary meeting in Lexington, Ky., April 5–8. Two significant actions were taken: the approval of a consensus report on the ordained ministry, one of the most controversial barriers to full church unity; and the decision to form a special commission to draw up "the outline of a possible plan of union."

Good relations between Protestants and Roman Catholics were strengthened in 1965. An unprecedented number of Protestant observers attended the fourth and final session of the Ecumenical Council Vatican II in Rome. In Spain, a country once known for its oppression of Protestants, Roman Catholics and Protestants came together for the first time in the public observance of the Week of Prayer for Christian Unity, celebrated throughout the world from January 18 to 25. In France, work was begun on a joint translation of the Bible. In the United States, Lutherans and Presbyterians separately engaged in official theological dialogue with Roman Catholics.

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ROMAN CATHOLICISM

The visit of Pope Paul VI to the United Nations and the closing session of Ecumenical Council Vatican II were among the major events of a history-making year.

Pope Paul's Address to the United Nations. For the first time in history, a reigning pope set foot on the Western Hemisphere when Paul VI flew to New York on October 4 to address the UN General Assembly. Almost every move of his one-day visit, including his drive through miles of city streets

U.S. CHURCH MEMBERSHIP, 1964*

Religious body	Members
Adventists, Seventh-day	370,688
American Carpatho-Russian Orthodox Greek Catholic Church	102,000[1]
Apostolic Overcoming Holy Church of God	75,000[2]
Armenian Church, Diocese of N.A., Diocese of Calif.	132,000
Assemblies of God	555,992
Baptist Association, American	719,100
Baptist Association, North American	174,000[3]
Baptist Association of America, Conservative	300,000
Baptist Churches, General Association of Regular	154,767[4]
Baptist Convention, American	1,559,103[4]
Baptist Convention in the U.S.A., National Primitive	768,800
Baptist Convention, Southern	10,598,429
Baptist Convention, U.S.A., Inc., National	5,500,000[5]
Baptist Convention of America, National	2,668,799[2]
Baptist Evangelical Life and Soul Saving Assembly of U.S.A., National	57,674[6]
Baptists, Free Will	171,676[4]
Baptists, General	62,841
Baptist General Conference	86,793
Baptist General Conference, North American	53,346
Baptists, Primitive	72,000[7]
Baptists, United	63,641[8]
Baptist Church, United Free Will	100,000[5]
Brethren, Church of the	199,854
Buddhist Churches of America	109,965
Bulgarian Eastern Orthodox Church	86,000[1]
Christian and Missionary Alliance	63,136
Christian Churches (Disciples of Christ), International Convention	1,920,760
Church of Christ, Scientist	268,915[9]
Church of God, The	74,511[4]
Church of God (Anderson, Ind.)	143,725
Church of God (Cleveland, Tenn.)	205,465
Church of God in Christ	413,000
Church of the Nazarene	337,033
Churches of Christ	2,250,000[3]
Congregational Christian Churches, National Association of	110,000
Episcopal Church in the United States	3,340,759[4]
Evangelical Covenant Church of America	64,685
Evangelical United Brethren Church	750,450[4]
Federated Churches	88,411[4]
Friends, Five Years Meeting of	69,543
Greek Orthodox Archdiocese of North and South America	1,735,000
Independent Fundamental Churches of America	103,617
International Church of the Foursquare Gospel	89,215[4]
Jehovah's Witnesses	315,568
Jewish Congregations	5,600,000[4]
Latter-day Saints, Church of Jesus Christ of	1,850,000
Latter Day Saints, Reorganized Church of Jesus Christ of	165,426
Lutheran Church, The American	2,587,204[10]
Lutheran Church in America	3,131,062[11]
Lutheran Church-Missouri Synod	2,650,857
Lutheran Synod, Wisconsin Evangelical	358,466
Mennonite Church	78,681
Methodist Church	10,304,184
Methodist Episcopal Church, African	1,166,301[6]
Methodist Episcopal Church, Christian	444,493[3]
Methodist Episcopal Zion Church, African	770,000[12]
Methodist Church of North America, Free	58,164
Moravian Church in America	62,751
North American Catholic Church	62,575[1]
North American Old Roman Catholic Church	83,700
Pentecostal Church of God of America, Inc.	115,000[4]
Pentecostal Church, Inc., United	150,000[1]
Pentecostal Holiness Church, Inc.,	60,665
Polish National Catholic Church of America	282,411[13]
Presbyterian Church, Cumberland	80,455[4]
Presbyterian Church in the U.S	944,716
Presbyterian Church in the U.S.A., The United	3,292,204
Reformed Church, Christian	268,165
Reformed Church in America	230,731
Roman Catholic Church	45,640,619
Romanian Orthodox Episcopate of America	50,000
Russian Orthodox Catholic Church in America, Patriarchal Exarchate	151,886
Russian Orthodox Church Outside Russia	55,000[6]
Russian Orthodox Greek Catholic Church of America	600,000
Salvation Army	264,910
Serbian Eastern Orthodox Church	50,000[4]
Spiritualists, International General Assembly of	164,072[2]
Syrian Antiochan Orthodox Church	110,000[4]
Triumph the Church and Kingdom of God in Christ	42,690
Ukrainian Orthodox Church of U.S.A	87,200
Unitarian Universalist Association	167,892
United Church of Christ	2,067,223[14]

* Mainly for the calendar year 1964 or a fiscal year ending in 1964. (Source: National Council of Churches of Christ in the U.S.A., *Yearbook of American Churches for 1966*) [1] 1962. [2] 1956. [3] 1961. [4] 1963. [5] 1958. [6] 1951. [7] 1950. [8] 1955. [9] Data not reported; figure given here from Census of Religious Bodies, 1936 (U.S. Bureau of Census). [10] Includes membership of The Evangelical Lutheran Church, Lutheran Free Church, and United Evangelical Lutheran Church. [11] Includes membership of the American Evangelical Lutheran Church, Augustana Evangelical Lutheran Church, and The United Lutheran Church in America. [12] 1959. [13] 1960. [14] Includes membership of Congregational Christian Churches and Evangelical and Reformed Church.

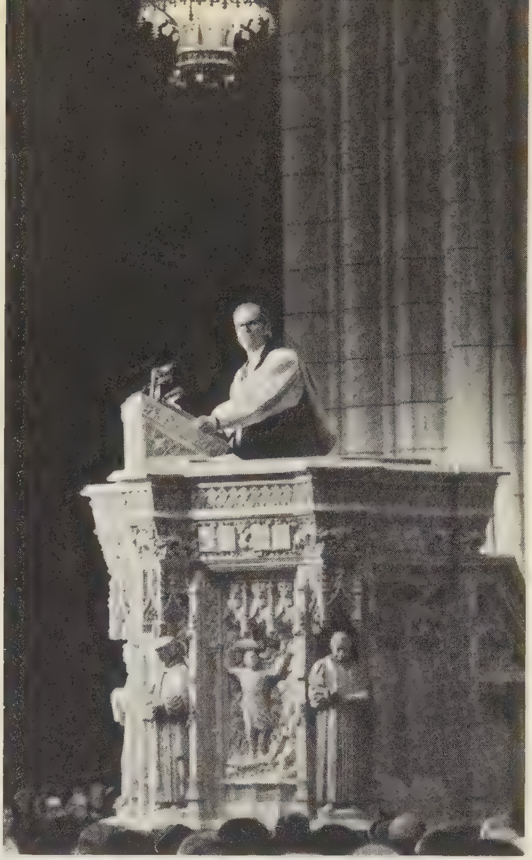
and his Mass at Yankee Stadium, was broadcast internationally by television. His plea for peace and his later call for peace in Vietnam, received the respectful attention of world leaders.

Close of the Ecumenical Council. Ecumenical Council Vatican II, which opened in 1962, held its fourth and final session from Sept. 14 to Dec. 8, 1965. The Ecumenical Council met to effect an *aggiornamento,* an adjustment to the 20th century world, and to promote Christian unity. Its deliberations resulted in the publication of 16 documents, 11 of which were proclaimed during the final session. They included a constitution on divine revelation and another on the church and the modern world, and decrees concerning the pastoral office of bishops, members of religious orders, seminary training, priestly life and ministry, missions, and the lay apostolate. There were also three declarations, one dealing with Christian education, one with religious liberty, and another with the relations between the church and non-Christian religions. This last declaration condemned anti-Semitism and absolved the Jews as a people from collective guilt in the Crucifixion.

In response to the wishes of the Council, Pope Paul VI issued (September 15) a motu proprio, *Apostolica sollicitudo,* which created on a permanent basis a synod of bishops in Rome. Most of the members of the synod will be Latin rite bishops elected by episcopal conferences throughout the world on a proportional system according to the number of bishops in a country. Eastern rite Catholics and religious orders will also send representatives. The synod's functions will be mostly consultative but at times deliberative. The pope, to whom the synod will be responsible directly and immediately, will convoke meetings (general, extraordinary, or special) on opportune occasions. He will indicate the problems to be discussed, ratify the selection of members, and preside at gatherings himself or through a representative.

Progress of the Ecumenical Movement. The Catholic Church became more intimately involved in the ecumenical movement, which progressed notably during 1965 and resulted in increased dialogue, better understanding, and more cordial relations between Christian churches, if not in doctrinal unity. Metropolitans Melito of Heliopolis and Chrysostomus of Myra, who had served respectively as president and secretary of the Panorthodox Conference at Rhodes (November 1964), came to Rome as delegates of Athenagoras I, Ecumenical Patriarch of Constantinople, and were received in solemn audience by the pope (February 15). Cardinal Bea, president of the Secretariat for Christian Unity, returned the visit by traveling to Constantinople (Istanbul, Turkey), where Athenagoras welcomed him (April 3). On December 7 the pope and the patriarch advanced a step toward reunion by expressing publicly their regrets at the mutual excommunications in 1054 of Michael Cerularius, Patriarch of Constantinople, and Cardinal Humbert, the papal legate, and the resultant separation of the Eastern from the Western Church.

Increase in the College of Cardinals. Twenty-seven new cardinals received their red hats on February 22. There were 17 from Europe, 4 from Africa, 3 from Asia, 1 from South America, and 2 from North America. Among them were Archbishops John Heenan of Westminster, England; William Conway of Armagh, Ireland; Maurice Roy of Quebec; and Lawrence Sheehan of Baltimore. This consistory raised the membership in the sacred college to 103, the highest total in its history. As of February 22, Italy had 32 cardinals; France and Spain, 7 each; the United States, 6; Germany and Brazil, 4 each; and Canada, 3. The death of Cardinal Meyer of Chicago in April lowered the American representation to five.



WIDE WORLD

EPISCOPAL CHURCH in the United States installed the Rt. Rev. John Elbridge Hines as its presiding bishop in ceremony at the Washington National Cathedral on January 27.

Change in the Roman Curia. A significant change in the organization of the Roman Curia occurred on December 6 when The Sacred Congregation of the Holy Office became the Congregation for the Doctrine of the Faith. Along with the change of name came a diminution of its powers, a loss of its preeminence among the congregations, and an alteration in its procedures to make them less secret and to provide defendants an opportunity to present their case before having judgments passed on their writings or actions.

See also Roman Catholic Church.

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JUDAISM

In 1965 the Jewish community in the United States worked toward the implementation of social legislation passed by Congress while continuing its efforts to assure the commitment of young Jews to Judaism. Of great concern to Jews throughout the world were the fate of the Roman Catholic Church's declaration on the Jews at the Ecumenical Council and the situation of the Jews in Soviet Russia.

The American Jewish Community. In the United States there are an estimated 1,600 Orthodox congregations, organized in the Union of Orthodox Jewish Congregations; 770 Conservative, organized in the United Synagogue of America; and 660 Reform, which belong to the Union of American Hebrew Congregations. The National Jewish Welfare Board serves as coordinating body of the Jewish community centers and the Young Men's and Women's Hebrew Associations. Among the community relations agencies, the American Jewish Committee, American Jewish Congress, and Anti-Defamation League have the largest membership. The physical needs of the community are served by the Council of Jewish Federations and Welfare Funds and its many affiliated agencies.

A problem widely discussed among American Jews is the tendency among second- and third-generation Jews to disassociate themselves from the community, a tendency which can be counteracted by proper guidance. Many of the agencies concerned with Jewish affairs assert that young people must be imbued with the importance of participating in the activities and responsibilities of the Jewish community. These agencies place on the Jewish leadership the responsibility to provide programs to encourage both commitment to Judaism and full participation in American society.

In 1965, communal agencies continued a policy of extending their work on a nonsectarian basis to the total community, in cooperation with Catholic, Protestant, and nonreligious organizations. They are involved in programs such as vocational rehabilitation, and helping school dropouts.

The educational needs of children in low-income families moved a large segment of the organized Jewish community to support the Elementary and Secondary Education Act of 1965, which provides for certain forms of federal aid to all students, including those in religious schools. This support was a departure from a hitherto unanimous stand against any measures tending to violate the principle of separation of church and state.

Jewish organizations also pledged themselves to do all within their power to achieve the purposes of the Voting Rights Act of 1965—to implement fair employment, school integration, and fair housing. To demonstrate their participation, representatives of Jewish agencies of all types and rabbis of all denominations flocked to Alabama for the five-day protest march from Selma to Montgomery in August.

The Catholic Declaration on the Jews. Of deep interest to the Jews was the action of the final session of Ecumenical Council Vatican II on the declaration on the "Relationship of the Church to non-Christian Religions," which contained the much-debated declaration on the Jews, exonerating them of collective guilt in the crucifixion of Jesus.

On October 15, by a vote of 1,763 to 250, the Council gave final approval to the declaration. It was proclaimed by Pope Paul as one of five decrees in a ceremony on October 28. The decree is a "doctrinal" not a "disciplinary" statement and, as such, it is irreversible. Although not so forceful as the original text, the document is considered by leading Catholic and Jewish circles in the United States to have achieved its essential aim—the removal of any theological justification for anti-Jewish discrimination.

Anti-Semitism in the Soviet Union. Jews all over the world, and non-Jews as well, continued to demonstrate serious concern over the situation of Soviet Russia's Jews. There were some indications of a growing sensitivity on the part of the Soviet government to the flood of protests. The government permitted a delegation of the Orthodox Rabbinical Council of America to visit Moscow in July and to address worshippers in the Central Synagogue. The delegation received official assurances that some of the grievances of Soviet Jews were being redressed. An unusual occurrence was the publication of an editorial in the official newspaper *Pravda* in September that discussed Communist doctrine and its rejection of anti-Semitism. However, only minor concessions were made, and the American Jewish Conference on Soviet Jewry went ahead with the Eternal Vigil for the Soviet Jews in Washington on September 19. More than 7,500 persons, including prominent non-Jews, took part in this week-long demonstration of interfaith solidarity.

Anti-Semitism in Latin America. In the Latin American countries, too, the position of the Jews has been precarious. Although, in the latter part of 1964, the Argentine government finally began taking steps to curb anti-Jewish activities, overt anti-Semitism is still rampant. Another problem is the complete inadequacy of communal organizations. There is a critical shortage of qualified rabbis, teachers, social workers, educational materials, and guidance in communal activities. As a beginning, the Jewish Institutes in Argentina and Brazil, with the cooperation of the American Jewish Committee, set up a new cultural and religious community-service program.

The World Jewish Community. At the beginning of 1965, there were 5,612,000 Jews in the United States and an additional one million in the rest of the Western Hemisphere, together constituting close to half of the world Jewish population of 13,210,000. An estimated 3,933,000 Jews lived in Europe, 2,345,000 in Asia, and 264,000 in Africa.

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EASTERN ORTHODOXY

Implementation of the decisions of the Third Pan-Orthodox Conference of Rhodes (1964) was a main concern of the Orthodox Churches in 1965. The Orthodox churches behind the Iron Curtain showed a stronger will for freedom from the Communist governments of their countries. The desire for the coming together of the Christian churches of the world became evident not only in the Roman Catholic and the Protestant churches, but also in the ancient churches of the East—the Monophysites, the Armenians, and the Copts.

Moves Toward Unity of the Churches. Evidences of the spirit of unity were found in the exchange of congratulatory letters between Pope Paul VI and the Ecumenical Patriarch Athenagoras I upon the first anniversary of their historic meeting in Jerusalem (Jan. 5–6, 1964); the presence of Orthodox and Protestant observers at Ecumenical Council Vatican II late in 1965; and the meeting of Pope Paul VI with Archbishop Iakovos, primate of the Greek Orthodox Church of North and South America, in New York on October 4. During the year a dialogue began between Orthodox, Anglican, and Old Catholic churches. On December 7, 1965, the mutual excommunications of the Churches of Rome and Constantinople (Istanbul), which took place in the year 1054, were simultaneously nullified in Rome and Constantinople through mutual agreement of Pope Paul VI and Patriarch Athenagoras I.

The Roman Catholic Church, the World Council of Churches, and the National Council of Churches of Christ in America came forward with strong protests against the persecutions of the Ecumenical Patriarchate by Turkey.

Orthodox Churches in the Americas. In the United States the ethnic Orthodox churches have approximately 7 million members. The largest body is the Greek Orthodox Archdiocese of North and South America. Archbishop Iakovos, its primate, is also a president of the World Council of Churches.

The Orthodox Churches in America have established the Standing Conference of Canonical Orthodox Bishops in America, whose president is Archbishop Iakovos. The members of the conference are the following Orthodox churches: Albanian Orthodox Diocese of America, Bulgarian Orthodox Church in America, American Carpatho-Russian Greek Orthodox Diocese of America, Russian Orthodox Greek Catholic Church in America, Patriarchal Exarchate of the Russian Orthodox Church in the Americas, Holy Ukrainian Autocephalic Orthodox Episcopate, Ukrainian Orthodox Church of America, Syrian Antiochian Orthodox Archdiocese of New York and North America, Serbian Orthodox Church in the United States and Canada, and the Romanian Orthodox Episcopate.

The Greek Orthodox Archdiocese of North and South America commemorated the closing of its first centennial celebration in 1965. The Standing Conference of Canonical Orthodox Bishops in America decided to begin a dialogue with Roman Catholic theologians and to be represented at all future meetings of the World Council of Churches and the National Council of Churches of Christ in America.

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ISLAM

A religious faith finding expression in political events was again the characteristic phenomenon of the Islamic world in 1965. In the United States, the split in the Black Muslim movement was exacerbated by the murder of dissident leader Malcolm X.

Muslim Countries. Border incidents between India, which is predominantly Hindu, and Pakistan, which is predominantly Muslim, developed into open warfare in September. After a number of clashes, an uneasy truce under United Nations auspices went into effect. The Indian-Pakistani dispute resulted from conflicting claims to the state of Kashmir. The Pakistanis insist that Kashmir should be allowed to decide its own fate by means of a plebiscite. Kashmir has a largely Muslim population, and Muslim Pakistan is confident that a plebiscite would result in separation of Kashmir from India.

In Indonesia, a country with more than 85,000,000 Muslims, the influence of religion on politics was evident in 1965. During the fall an attempted coup, believed to have been led by Communists, resulted in an army-directed attack on Indonesia's Communists. Muslim groups played a leading role in anti-Communist activity.

In the Arab world, the Vatican Council's stand against anti-Semitism caused a considerable outcry. The Council's move is interpreted as a prelude to Vatican recognition of Israel.

The quest for Arab unity remained far from realization in 1965. Habib Bourguiba, president of Tunisia, was branded a traitor to the cause when he suggested the possibility of compromise and coexistence with Israel.

Zionism and missionary work were central themes of the second World Muslim Conference, held at Mecca in April. King Faisal of Saudi Arabia called for an Islamic conference leading to the creation of a united Muslim bloc.

In the United Arab Republic the long-suppressed Muslim Brotherhood, which the Egyptian government considers a reactionary force in the country, rose to the surface with an elaborate, but unsuccessful, bid (discovered in August) to assassinate President Nasser.

The Black Muslims. In the United States, the split in the Black Muslim movement was made worse by the murder of Malcolm X, leader of a dissident group. Supporters of Malcolm X threatened vengeance against the followers of Elijah Muhammad (founder of the Black Muslims), whom they believed responsible for the murder.

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ORIENTAL RELIGIONS

The impact of the Hindu and Buddhist religions on national affairs was demonstrated again in India and in Southeast Asia in 1965. Hindu-Muslim rivalry contributed to an undeclared war between India and Pakistan in September. Buddhists took an active part in politics in Ceylon, Vietnam, and other countries.

Hinduism. Differences in religious beliefs and customs have divided Hindus and Muslims for centuries and have often led to violence. At the time of the partition of India in 1947, nearly a million members of these faiths were killed in riots, and tension persisted between the new state of India, with its Hindu majority, and Pakistan, a Muslim country. Serious fighting broke out in 1965 over the rivalry between India and Pakistan for control of Kashmir. In May, India detained Sheikh Abdullah of Kashmir because of his contacts with Chinese Communists, and this provoked a one-week general strike by Kashmir Muslims. During this period both India and Pakistan complained of constant violations of the cease-fire line on the border between India and both sections of Pakistan. An open clash occurred in the Rann of Kutch in May, clashes took place in Kashmir in July, and a large-scale undeclared war broke out along the whole border in September. The United Nations ordered a cease-fire which became more or less effective late in Septem-

EVANGELIST BILLY GRAHAM preaches the concluding sermon of a ten-day crusade in 1965 at the Houston (Texas) Astrodome. President and Mrs. Johnson attended the event.

WIDE WORLD

KEYSTONE

WORLD JEWISH CONGRESS Governing Council, headed by (l. to r.) Israel M. Sieff, vice president, Dr. Gerhard Riegner, secretary general, and Dr. Nahum Goldmann, president, held its first meetings in London on December 16 and 17.

ber, and India and Pakistan agreed to withdraw their troops in January 1966.

In a minor incident of the year, the Hindu Cow Servicing Society threatened a civil-disobedience campaign if the government failed to ban all cow slaughter. The cow is sacred to orthodox Hindus.

Buddhism. In Ceylon, Buddhist monks reentered politics, after an eight-year abstention, to oppose the drift to the left of Mrs. Sirimavo Bandanaraike, who was forced to resign as prime minister after the election of March 22. The leader of the United National party, Dudley Senanayake, succeeded her and began a more pro-Western course.

In April, Burmese Buddhist monks staged antigovernment demonstrations throughout the country to protest a purge of politically active clergy.

Reports from Tibet indicated that Communist China had accused the Panchen Lama of "activities against the people's motherland and socialism" and had removed him to Peking, where he would be given a chance to "make a fresh start if he reforms." In India, the exiled Dalai Lama spread a report that all Tibetans between 18 and 45, including women and monks, were being forced to undergo guerrilla training for a possible war with India.

Buddhist leaders in South Vietnam continued to urge an implicitly anti-U.S. neutralism. The year began with Buddhist demonstrations against the military government and U.S. support of it. A Buddhist girl committed suicide during the demonstrations. When Nguyen Khanh was ousted as premier, to be succeeded by Nguyen Cao Ky, Buddhist opposition to the government subsided slightly. Yet tension between Catholics and Buddhists continued.

The religious scene in Japan was still dominated in 1965 by the burgeoning Buddhist sect, Soka Gakkai. In the July elections its political arm, Komeito (Clean and Fair Party), obtained 20 seats in the Upper House of the Diet, an increase of five. Soka Gakkai professes a neutralist pro-Japan policy which is not militarist nor fascist but a pursuit of "Buddhist democracy," freed of foreign entanglements, whether American or Chinese.

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REPUBLICAN PARTY. See *Political Parties.*

RESERVE FORCES, Military. See NATIONAL DEFENSE; and articles on the individual military services.

RESOR, Stanley R. See biographical sketch under ARMY.

RESPIRATORY DISEASES

In recent years significant advances have been made in establishing the causes of acute respiratory infections. Research has established that 90% of acute respiratory infections are due to viruses. Since 1955, over 150 new viruses, comprising several groups, have been isolated and shown to be important causes of acute respiratory disease. These virus groups are adenoviruses, parainfluenza viruses, enteroviruses, rhinoviruses, syncytial viruses, and other filterable agents not yet classified. Mycoplasma organisms (PPLO), which cause severe pneumonias, have also been identified and characterized.

Viral Infections. Because virus infections of the respiratory tract do not confer a permanent immunity, children have an average of six respiratory infections annually, and adults have an average of four. Some infections may be due to the same virus strain, but more frequently they are caused by different strains or types of the same virus group, or by strains of different virus groups. Each strain of virus may produce infections of different degrees of severity in a given group because of such factors as age, the "immune state" of the individual, and the nature of the infecting dose. Thus, in different individuals infections by a single viral agent may manifest themselves as a simple cold with a runny nose, sore throat, pharyngitis, laryngitis, tracheitis, bronchitis, bronchiolitis, or fatal pneumonia.

Acute nonbacterial respiratory infections are responsible each year for 50,000 to 60,000 deaths in the United States. Of these, from 10,000 to 15,000 are estimated to occur in infants under one year of age. In all age groups, respiratory infections from the newer respiratory viruses, from epidemic influenza, and from pneumonia due to bacterial agents rank fourth as the cause of death from diseases. The highest mortality occurs among the very young and the aged.

Chronic Respiratory Disease. Recent studies indicate that a relationship exists between acute respiratory illnesses and chronic pulmonary diseases. Lung specialists generally agree that one of the major underlying causes of chronic bronchitis and emphysema is recurrent infections (inflammation) of the lower air passages. This view of the genesis of chronic bronchitis is supported by recent studies which show that a number of the newly recognized viral agents, particularly the parainfluenza and syncytial viruses, are frequently the cause of repeated acute respiratory infections in adults with chronic lung disease.

Although cigarette smoke and other air pollutants may irritate the respiratory mucosa, the primary significant damage to the lungs is considered to be brought about by viruses which grow in and destroy the cells lining the air passages. Each acute respiratory infection may result in only a small degree of destruction and scarring, but it has been postulated that accumulative infections over a lifetime can cause permanent and extensive lung changes characteristic of chronic bronchitis with and without emphysema.

Chronic respiratory disease is one of the fastest-rising causes of disability and death among adults. From July 1961 to June 1963 over 5 million individuals were estimated to have chronic bronchitis, emphysema, or both. According to mortality data, deaths from pulmonary emphysema and chronic bronchitis have quadrupled in the past 10 years. Only cancer equals this rapid rise as a cause of death by disease.

Prevention. Because there is no specific treatment for virus infections of the respiratory tract, prevention is important. Effective vaccines are available only for the prevention of epidemic influenza. Further control of acute and chronic respiratory diseases must await the development of equally effective vaccines against adenovirus, parainfluenza, syncytial viruses, and mycoplasma infections. Once available, such vaccines may prevent thousands of deaths annually. They also may reduce accumulative lung tissue damage, which leads to the "respiratory cripple" in later life.

A large number of effective antibiotics for the treatment of bacterial infections of the respiratory tract are available. Successful results depend on early treatment.

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RETAIL STORE SALES

In the first half of 1965, retail store sales in the United States were at a record annual rate of $277 billion, after seasonal adjustment. This was 8% higher than in the first half of 1964. Continued sales advances were expected for the balance of the year 1965.

Sales remained stable in 1960 and 1961. They then advanced 5% to 8% per year in 1962, 1963, and 1964. Rising consumer income and federal tax cuts were the major factors in the sales advance. Retail prices increased only 5% from 1960 to mid-1965.

Sales. Consumers spent 60% of their income (after taxes) at retail stores in the first half of 1965: 20% at durable goods stores and 40% at nondurable goods stores. Per capita purchases reached a seasonally adjusted annual rate of $1,435, and increased about 30% between 1955 and 1965.

SALES OF RETAIL STORES, 1963–65

	1963	1964	First half 1965[1]
		(Millions of dollars)	
All retail stores:	246,435	261,630	277,140
Durable goods stores[2]	80,098	85,116	93,006
Nondurable goods stores[2]	166,337	176,514	184,134
Durable goods stores:			
Automotive group	45,959	48,491	55,466
Furniture and appliance group	11,612	13,093	13,112
Lumber, building, hardware group	11,566	11,644	12,102
Nondurable goods stores:			
Apparel group	14,460	15,567	15,614
Drug and proprietary stores	8,175	8,585	8,988
Eating and drinking places	18,071	19,401	20,760
Food group	59,143	63,191	64,250
Gasoline service stations	19,365	20,295	21,532
General merchandise group	28,660	31,721	33,940
Department stores	16,683	18,631	20,376

[1] Seasonally adjusted annual rate. [2] Includes estimates for other retail stores not shown separately. Source: U.S. Department of Commerce.

In the first half of 1965 about $33 billion at a seasonably adjusted annual rate was spent at chain stores with 11 or more outlets. This figure represented an increase of 6.5% over the corresponding total for the first half of 1964. One fourth of retail purchases were made at chain stores. Food and general merchandise stores with 11 or more outlets accounted for $24 billion, or three fourths of the chain store volume.

All major businesses recorded gains from mid-1964 to mid-1965. Sales of automotive stores rose 15%; general merchandise, 11%; eating and drinking places and gasoline service stations, 8.5% each; drug stores, 7.5%; and food stores, 5.5%.

Inventories. Retailers held $33 billion in inventories at mid-1965, an addition of $2.2 billion since mid-1964. In both mid-1964 and mid-1965, the value of the stocks was equivalent to 1.4 months of sales.

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RHODE ISLAND

Rhode Island's economy moved ahead to new levels of prosperity in 1965. In June the Providence-Pawtucket area, which since May 1960 had received almost $17 million in special federal aid funds was removed from the list of depressed areas. The ratio of unemployed in the state was down to 4.1% by September—the lowest ratio since the compilation of unemployment records began in 1947. The average hourly earnings of workers in the state amounted to $2.21 in October, as compared with $2.12 in October 1964.

Tourism. In 1965, Rhode Island enjoyed the best and longest tourist season in years. To promote tourism further, the Rhode Island Travel-Tourist Association was formed in August. Also, Rhode Island Recreation Building Authority, with the

RHODE ISLAND : Information Highlights

Area: 1,214 square miles.
Population: 897,000 (1965 est.).
Chief Cities (1965 est.): Providence, the capital (195,000); Pawtucket (80,500); Warwick (75,500); Cranston (72,000); Newport (50,500); Woonsocket (46,500); East Providence (44,500); West Warwick (22,300).
Government: *Chief Officers*—governor, John H. Chafee (Republican); lt. gov., Giovanni Folcarelli (Democrat); secy. of state, August P. LaFrance (D); atty. gen., J. Joseph Nugent (D); treas., Raymond H. Hawksley; comm. of educ., Dr. William P. Robinson, Jr.; chief justice, Thomas H. Roberts. *Legislature*—General Assembly (convened Jan. 4, 1966); Senate, 46 members (30 Democrats, 15 Republicans, 1 Republican Independent); House of Representatives, 100 members (76 D, 24 R).
Education: *School enrollment* (1964–65)—public elementary, 86,106 pupils (3,289 teachers); public secondary, 64,595 pupils (3,068 teachers); nonpublic schools, 60,300 pupils (2,130 teachers); college and university (fall 1964), 28,706 students. *Public school expenditures* (1964–65)—$70,000,000 ($514 per pupil); average teacher's salary, $6,251.
Public Finance (fiscal year 1965): *Revenues,* $153,011,460 (3.5% sales tax, $36,971,862; motor fuel tax, $19,309,980; federal funds, $22,756,777). *Expenditures,* $150,386,073 (education, $33,603,947; health and welfare, $58,220,016; highways, $10,647,476). *State debt,* $117,045,971 (June 30, 1965).
Personal Income (1964): $2,298,000,000; average annual income per person, $2,514.
Public Assistance (fiscal year 1965): $24,977,721 to 39,975 recipients (aged, $6,834,112; dependent children, $11,516,414).
Labor Force (employed persons, August 1965): *Agricultural,* 3,000; *nonagricultural* (wage and salary earners), 313,700 (38% manufacturing, 18% trade, 15% government). *Unemployed persons* (August 1965)—17,400.
Manufacturing (1963): Value added by manufacture, $949,756,000 (textile mill products, $161,838,000; primary metals, $98,292,000; nonelectrical machinery, $88,562,000; electrical machinery, $54,957,000; fabricated metals, $63,753,000; food and products, $61,887,000).
Agriculture (1964): *Cash farm income,* $20,711,000 (livestock, $11,791,000; crops, $8,836,000; govt. payments, $84,000). *Chief crops* (tons)—potatoes, 48,800; hay, 30,000; apples, 4,300; peaches, 300.
Mining (1964): *Production value,* $2,549,000 (ranks 49th among the states). *Chief minerals* (tons)—sand and gravel, 1,647,000; stone, 450,000.
Fisheries (1964): *Commercial catch,* 36,393,778 pounds ($3,641,558). *Leading species*—scup, 8,673,021 pounds ($527,849); yellowtail flounder, 8,249,208 pounds ($470,568); blackback flounder, 4,080,536 pounds ($215,822); whiting, 3,904,515 pounds ($103,999).
Transportation: *Roads* (1964), 4,508 miles (3,585 surfaced); *motor vehicles* (1964), 424,028; *railroads* (1963), 158 miles; *airlines* (1965), 6 (12 airports).
Communications: *Telephones* (1965), 413,000; *television stations* (1964), 2; *radio stations* (1964), 20; *newspapers* (1965), 7 (daily circulation, 312,579 in 1964).

power to insure mortgages for recreational facilities up to $5 million, was established by the General Assembly.

Strikes. The state was plagued by a series of strikes in 1965. These included walkouts of workers at the U.S. Rubber Company, the Narragansett Brewing Company, the Grinnell Company, nine moving firms, and a number of construction projects.

Transportation. The completion of Interstate Highway 95 through Providence eased traffic jams in that city. In November, construction began on the $30 million Narragansett Bay Bridge between Newport and Jamestown.

Fair-Housing Law. The General Assembly's 69-day session that ended on May 15, 1965, was the most productive in years. Legislation included a fair-housing act, adopted after six years of controversy. The measure, which had been defeated by a vote of 61 to 32 in the House of Representatives in 1964, was passed by a 54 to 42 vote in 1965. Rhode Island thus became the 14th state to prohibit discrimination in the sale and rental of housing.

Other Legislation. New measures also included an increase in the sales tax, from 3.5% to 4%, to help finance the state's record $137 million budget. Business benefited from a new merit-rating law that changed the unemployment compensation tax from a flat 2.7% to a flexible rate having a possible low of 1.6% for employers with stable employment records. The Assembly also authorized a state census to provide a basis for reapportioning Assembly seats, and extended medical care for the aged.

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RHODESIA

Prime Minister Ian Douglas Smith declared Rhodesia's independence from Britain on Nov. 11, 1965—the first declaration of its kind since the American colonies broke away in 1776. In British eyes and world opinion, Rhodesia became an outlaw nation, whose 220,000 white citizens had illegally seized political control over the country's 4,000,000 Africans. Though long rehearsed and aggressively pressed, Rhodesia's actual break shocked the world. The worst fear was that an explosive African nationalist invasion from without, or a revolt from within, or both, might precipitate racial warfare.

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RHODESIA'S PRIME MINISTER IAN D. SMITH proclaims his nation's independence of Britain, reading the historic declaration of independence in a broadcast on Nov. 11, 1965.

British Retaliation. While Prime Minister Smith was broadcasting his historic independence statement, British Governor Sir Humphrey Gibbs, acting on orders of the queen, declared Smith and his cabinet dismissed for an unconstitutional act. British Prime Minister Harold Wilson retaliated swiftly by expelling Rhodesia from the sterling area, freezing Rhodesian funds in British banks, stopping British purchase of Rhodesia's annual $112 million tobacco crop and most other exports, ending British aid, and suspending trade preferences. Wilson was under pressure from Britain's Conservative party not to take harsher measures, while African states were urging British military intervention in Rhodesia. On December 17 he announced an embargo on oil shipments to Rhodesia—the strongest economic sanction yet imposed.

African Reaction. In Africa, Britain was severely criticized for not taking stronger action. On December 3, at the request of Zambia's President Kaunda, Britain sent a token unit of the Royal Air Force to guard the Zambian side of the Kariba Dam, but refused to move troops to the Rhodesian side. The Organization of African Unity, impatient with economic sanctions, resolved on December 5 to break

RHODESIA · Information Highlights

ASIA
AFRICA

Area: 150,333 square miles.
Population: 4,260,000 (July 1, 1965, est.).
Chief Cities (1964 est.): Salisbury, the capital, 313,600; Bulawayo, 214,300.
Government: *Prime Minister*—Ian D. Smith. *Parliament*—Legislative Assembly, 65 members; party seating (1965): Rhodesian Front, 50; Rhodesia party, 2; independents, 13.
Education: *Total school enrollment* (1964)—872,889 (university, 650).
Finance (1964–65 est.): *Revenues*, $193,000,000; *expenditures*, $192,500,000; *public debt* (June 1963), $208,000,000; *monetary unit*, pound (0.3571 pound equals U.S.$1).
Gross National Product (1964): $929,000,000.
Economic Indexes (1964): *Industrial production*, 129 (1959=100); *cost of living*, 107 (1961=100).
Manufacturing (metric tons, 1964): Sugar, 270,000; cement, 250,000; beef (1962), 68,000; crude steel, 50,000; lumber (1963), 54,000 cubic meters.
Crops (metric tons, 1964–65 crop year): Tobacco, 126,300 (ranks 9th among world producers); tea, 1,500 (rank, 19th); maize, 499,000; peanuts, 122,000; citrus fruits, 20,000.
Minerals (metric tons, 1964): Chromite (1963), 374,114 (ranks 5th among world producers); tin, 520 (rank, 19th); nickel, 173 (rank, 13th); gold, 575,386 troy ounces (rank, 7th); bituminous coal, 3,044,000; iron ore, 824,000; asbestos, 139,208; pyrites, 82,000; kaolin, 19,000; copper, 16,639; silver, 18,463 troy ounces.
Foreign Trade (1964): *Exports*, $386,000,000; *imports*, $346,000,000. *Chief trading partners* (1962): Britain (took 31% of exports); U.S. (took 18% of exports); West Germany (took 11% of exports).
Transportation: *Roads* (1964), 47,754 miles (3,401 paved); *motor vehicles* (1964), 156,785 (automobiles, 118,103); *railways* (1963), 2,200 miles; *airline*, Central African Airways Corp.; *principal airport*, Salisbury.
Communications: *Telephones* (1964): 91,992; *television stations* (1964), 2; *television sets* (1964), 38,700; *newspapers* (1963), 4.

DEFIANT AFRICANS, rioting against Rhodesia's unilateral declaration of independence in November, threw garbage along the streets of Bulawayo.

UPI

relations with Britain on December 15 if the Rhodesian rebellion was not crushed by that date. However, only nine states—the Congo (Brazzaville), Guinea, Senegal, Niger, Tanzania, Ghana, Mauritania, the United Arab Republic, and Algeria—complied.

Rhodesian Africans, with their political parties banned and their leaders detained, put up little resistance. In Bulawayo, Africans demonstrated on November 22 and 23, calling for a general strike, but the Rhodesian police soon gained control.

World Response. Most nations rallied to support Britain's campaign of economic warfare. On November 12 the UN Security Council condemned Rhodesia's rebellion and called on all states to deny recognition to the Rhodesian government. On November 20 the council proposed strong economic sanctions, including the oil embargo. The United States, Canada, France, and Italy agreed to enforce the oil embargo, but Portugal was noncommittal. When Rhodesia retaliated by stopping oil shipments to Zambia on December 18, Britain and the United States began an airlift to supply oil to Zambia.

Only Portugal and the Republic of South Africa maintained something like normal diplomatic relations with Rhodesia, and even they stopped short of actual recognition.

Background. Founded as a British territory in 1890, Rhodesia was granted self-government in 1923. Britain retained veto power over legislation affecting Africans and continued to control foreign affairs. As scores of African territories received independence under African rule, white Rhodesians clung to their 1961 constitution, under which dual voting rolls assured them of 50 seats in the 65-seat legislature. Fear on the part of the whites that a British-imposed liberalization of the constitution would lead to African rule and the loss of their property and privileges resulted in the election of successively more conservative, anti-African governments. On April 14, 1964, Ian Smith was elected prime minister after he had promised to declare Rhodesia's independence. Tension heightened when Britain granted independence under African rule to nearby Malawi on July 6, 1964, and to adjoining Zambia on Oct. 24, 1964.

Negotiations. In a national referendum held on Nov. 5, 1964, registered voters overwhelmingly approved a unilateral declaration of independence, and in the election on May 7, 1965, Smith's Rhodesian Front party made a clean sweep of all 50 white seats. Thus armed, Smith prepared for a week of tough talks with Wilson in London from October 4 to 11, but the talks ended in deadlock. Back in Salisbury, Smith held daily cabinet meetings, weighing possible British countermeasures to a Rhodesian declaration of independence. Meanwhile, on October 11, the UN General Assembly approved a resolution urging Britain to prevent Rhodesia's independence.

Having ruled out armed British intervention, Wilson warned Smith of the grave economic consequences of illegal independence. Wilson's offer of arbitration by a mission of senior Commonwealth prime ministers was rejected by Smith on October 18 on the ground that such a mission would include Afro-Asians biased against white Rhodesian interests.

Hoping to turn Rhodesia from the brink, Wilson flew there on October 24. He talked to 120 leaders of both races, including Joshua Nkomo, the restricted African nationalist leader of the banned Zimbabwe African People's Union. Before departing on October 30, Wilson proposed that a royal commission draw up a constitution leading to independence. Unable to agree on terms by which the commission would reach a decision, Rhodesia declared a state of

AFRICAN DEPUTIES, led by Joshua Gondo (front, left), walk out of Parliament House in Salisbury on November 25, at the first session after Rhodesia declared independence.

UPI

emergency on November 5. The final, historic, and illegal break with Britain followed six days later. (See also AFRICA.)

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ROMAN CATHOLIC CHURCH

Paul VI became the first reigning pope to visit the United States or the Western Hemisphere, when he flew to New York on Oct. 4, 1965, to address the United Nations. During his one-day visit, he also conferred with President Johnson, celebrated Mass and preached in English at Yankee Stadium and traveled with his motorcade through the city. See also RELIGION–*Catholicism*.

In conformity with the growing ecumenical spirit, Catholics engaged in numerous interfaith dialogues in 1965. At one meeting in Washington, D.C., in June, three Catholic and three Protestant Episcopal bishops, together with their theological advisers, discussed obstacles in the path of improved relations. Catholic seminarians and priests occasionally attended lectures at Protestant seminaries, where Catholic priests sometimes delivered the lecture. A similar phenomenon occurred in Catholic seminaries.

The Revised Standard Version of the New Testament, with few variations in text, was published by a Benedictine press, after receiving an *imprimatur* for private reading by Catholics.

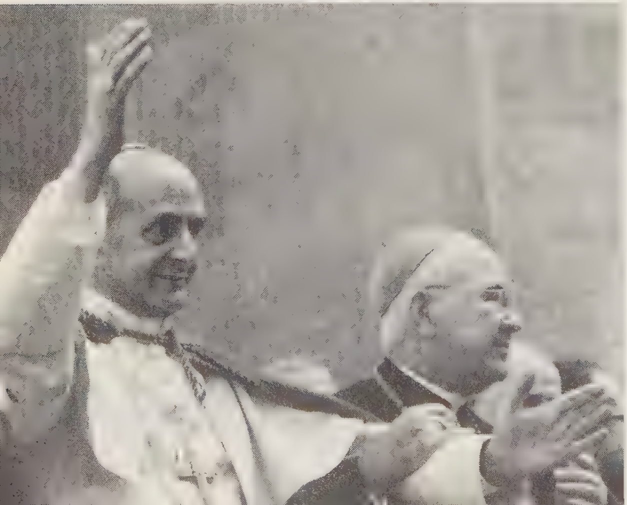
Priests, seminarians, and sisters participated actively in many of the civil rights demonstrations that highlighted the year 1965. See CIVIL RIGHTS.

In 1965 the estimated 45.6 million Roman Catholics in the United States constituted almost one fourth of the total population of the 50 states. The number represented an increase of 12 million in the past decade. About one third of the Catholics resided in the ten largest sees. These centers, in descending order of size, were: Chicago, New York, Boston, Los Angeles, Brooklyn, Newark, Detroit, Philadelphia, Pittsburgh, and Buffalo.

United States representation in the College of Cardinals in 1965 remained at five: Francis Cardinal Spellman of New York, Richard Cardinal Cushing of Boston, Joseph Cardinal Ritter of St. Louis, James Francis Cardinal McIntyre of Los Angeles, and Lawrence Cardinal Shehan of Baltimore. The latter received the red hat on Feb. 22, 1965. Albert Cardinal Meyer of Chicago died on April 9, 1965 (see NECROLOGY).

POPE PAUL VI greets crowd outside St. Patrick's Cathedral during his October 5 visit to New York and the United Nations. Francis Cardinal Spellman is at the right.

WIDE WORLD



Harold R. Perry, who was named auxiliary bishop of New Orleans in October, was the first Negro to be raised to the episcopate in the United States in the 20th century. The only other one was James Healy, bishop of Portland, Me., in 1875–1900.

In 1965 there were 17,637 Roman Catholic parishes in the United States. During 1964, converts to Catholicism numbered 126,000, or about 2,000 more than in 1963. The new converts included Luci Baines Johnson, daughter of the president, who became a convert on her 18th birthday. The number of baptisms in 1964 totaled 1,436,000; the number of deaths, 388,000.

For Latin rite Catholics there were 27 archdioceses (all metropolitan sees except Washington, D.C.), 114 dioceses, and one abbey *nullius dioceseos* (Belmont Abbey). The Washington archdiocese became a metropolitan see in October 1965, with the prelature nullius of the Virgin Islands as its suffragan. For the 600,000 Eastern rite Catholics there were two dioceses of the Ukrainian rite, and one archdiocese and two dioceses of the Byzantine rite.

In 1964, bishops, including titulars, numbered 212. There were 58,630 priests (35,925 diocesan, and 22,705 religious in 160 orders or congregations). Between 1954 and 1964 the number of priests increased by 10,000. Within this decade diocesan and religious seminarians increased from 34,000 to 49,000, and brothers, from 8,870 to 12,270. Religious women increased from 160,000 to 180,000, in 448 institutes by 1963, but with 60 less members than in 1964.

Catholic education continued its rapid expansion. Between 1954 and 1964, colleges and universities increased in number from 254 to 304, and enrollment rose from 242,000 to 385,000. In the same period high schools increased from 2,383 with 672,000 students to 2,465 with 1,095,000 students. Catholic elementary schools rose from 9,568 with an enrollment of 3.54 million to 10,931 with an attendance of 4.56 million. The full-time teaching staffs in all schools mounted in number from 135,000 to nearly 200,000 (104,000 sisters, 75,000 lay persons, 12,000 priests, 5,900 brothers, and 1,100 scholastics preparing for the priesthood).

In the decade 1954–64 the number of Catholic hospitals and sanatoria rose from 931 institutions with 138,000 beds to 952 with 161,000 beds. Orphanages and infant asylums, on the other hand, declined in number from 317 in 1954 to 257 in 1964, and in resident children from 34,000 to 23,000.

Circulation figures for the Catholic press exceeded 27 million in 1964. Some 20 million persons subscribed to 300 periodicals, 4.5 million to 121 weekly newspapers, and 380,000 to 53 diocesan directories.

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ROWING. See SPORTS.

RUBBER

In 1965, consumers in the United States used a record 2,020,000 long tons of rubber. (One long ton equals 2,240 pounds.) Synthetic rubber accounted for 75% of the total volume. Consumption of styrene-butadiene types (those primarily used in tires) totaled 1,080,000 long tons. The types developed for specific end uses, with stereo elastomers heading the list, accounted for 435,000 long tons.

U.S. Tire Production. Domestic factories produced 174,400,000 pneumatic tires during the year, up 8,000,000 units from 1964. All-time highs were set as passenger cars required 50,000,000 tires in original equipment and 93,000,000 for replacement. Other requirements were 19,700,000 tires for trucks and buses, 4,500,000 for farm tractors and implements, and 4,500,000 for industrial vehicles.

World Rubber Consumption. Rubber consumed in the free world, plus imports by Soviet-bloc countries, totaled 5,300,000 long tons in 1965. This figure included 2,960,000 tons of synthetic rubber, or 55.8% of the total. For the third consecutive year world consumption of synthetic rubber exceeded that of natural rubber. Soviet-bloc imports were estimated at 500,000 tons of natural rubber and 60,000 tons of synthetic.

World Rubber Production. World production of synthetic rubber accounted for 57.3% of total rubber output in 1965, compared with 55.7% in 1964. For four consecutive years synthetic rubber production has exceeded natural rubber output.

WORLD RUBBER PRODUCTION

Country	1963 (Long tons)	1964 (Long tons)	1965[1] (Long tons)
Natural rubber:			
Malaysia[2]	855,000	886,000	928,000
Indonesia	573,000	638,000	600,000
Thailand	187,000	218,000	195,000
Ceylon	103,000	110,000	115,000
Vietnam, South	71,000	73,000	75,000
Cambodia	40,000	45,000	48,000
India	37,000	43,000	48,000
Liberia	40,000	42,000	46,000
Nigeria	63,000	72,000	78,000
Congo (Léopoldville)	37,000	34,000	32,000
Brazil	20,000	28,000	25,000
All other countries	42,000	44,000	48,000
Total	2,068,000	2,233,000	2,238,000
Synthetic rubber:[3]			
United States	1,608,000	1,765,000	1,795,000
Canada	179,000	198,000	205,000
Germany, West	106,000	136,000	158,000
United Kingdom	125,000	153,000	165,000
Italy	95,000	108,000	116,000
France	97,000	128,000	144,000
Netherlands	85,000	90,000	95,000
Japan	90,000	120,000	155,000
Australia	17,000	18,000	21,000
Brazil	30,000	32,000	40,000
India	8,000	12,000	19,000
Belgium	...	15,000	20,000
Czechoslovakia	...	20,000	30,000
South Africa	...	10,000	27,000
Argentina	...	...	8,000
Total	2,440,000	2,805,000	2,998,000

[1] Estimated. [2] Including Sabah and Sarawak. [3] Information omitted on Communist countries, except Czechoslovakia.

New Products and Materials. Polyester cord passenger tires became available commercially in 1965, and construction of new plants for processing the cord began. Radial-ply tires were part of the original equipment on several 1966-model cars. Researchers experimented with polyisoprene rubber for commercial purposes and with fiberglass cord for radial-ply tires.

Melville A. Gumbs
Manager, Statistical Department
The Rubber Manufacturers Association, Inc.

RUMANIA

Rumania continued during 1965 to follow a policy of strict neutrality in the Sino-Soviet conflict. It boldly reorganized its party, government, and economy, without asking either China or the USSR.

Leadership. President Gheorghe Gheorghiu-Dej, who died of cancer on March 19, had been the Rumanian most responsible for the collapse of Moscow's grand design for eastern Europe. In 1962–63, Gheorghiu-Dej had won from Soviet Premier Nikita Khrushchev a recognition of Rumania's right to develop its economy along strictly nationalist lines. Gheorghiu-Dej had also taken advantage of the struggle between Moscow and Peking to chart a middle course that combined neutrality in regard to the Communist feud with a stubborn assertion of Rumania's interests. By the time of his death, a quiet campaign of de-Russification and withdrawal from satellite status had taken place in Rumania. Despite the dangerous steps Gheorghiu-Dej had taken, both Soviet President Anastas Mikoyan and Communist Chinese Premier Chou En-lai attended his funeral. (See Necrology for a biographical sketch of Gheorghe Gheorghiu-Dej.)

EASTFOTO

RUMANIAN COMMUNIST LEADER Gheorghe Gheorghiu-Dej died on March 19. Gheorghiu-Dej was largely responsible for Rumania's growing independence of the Soviet Union.

Regular elections to the Grand National Assembly and to the People's Councils were held on March 7. In the election, 99.96% of the eligible voters cast 99.85% of their ballots for the single list of candidates. The assembly elected Ion Gheorghe Maurer, the closest associate of Gheorghiu-Dej, as chairman of the Council of Ministers (premier), and named Chivu Stoica, another loyal follower, as president of the State Council.

The man who emerged as Gheorghiu-Dej's successor in the powerful post of secretary general of the Rumanian Communist party (changed from

RUMANIA · Information Highlights

EUROPE
ASIA
AFRICA

Area: 91,699 square miles.
Population: 18,927,000 (July 1, 1964, est.).
Chief Cities (1963 est.): Bucharest, the capital, 1,236,065; Cluj, 166,428; Timişoara, 150,257; Braşov, 133,532; Ploeşti, 131,379; Iaşi, 126,865.
Government: *President of the State Council*—Chivu Stoica (elected 1965); *Premier*—Ion Gheorghe Maurer (elected 1961). *Parliament*—Grand National Assembly, 465 deputies.
Religious Faiths: Rumanian Orthodox, 90% of population.
Education: *Literacy rate* (1956)—87% of population aged 15 and over. *Total school enrollment* (1962)—3,323,594 (primary, 2,694,441; secondary, 333,606; teacher-training, 7,024; technical, 253,090; higher, 35,433).
Finance (1965 est.): *Revenues*, $16,600,000,000; *expenditures*, $16,400,000,000; *monetary unit*, leu (6 lei equal U.S.$1).
Industrial Production Index (1964): 216 (1958=100).
Manufacturing (metric tons, 1964): Cement, 4,752,000; crude steel, 3,039,000; gasoline (1963), 2,397,000; wheat flour (1962), 2,088,000; sugar, 456,000; meat (1963), 267,600.
Crops (metric tons, 1963): Corn (1964), 6,503,000 (ranks 6th among world producers); wheat (1964), 3,800,000 (rank, 13th); sugar beets, 2,348,000 (rank, 16th); wool, 28,000 (rank, 11th); potatoes, 2,692,000; grapes, 937,000.
Minerals (metric tons, 1964): Salt, 1,809,000 (ranks 12th among world producers); manganese, 250,000 (rank, 11th); natural gas, 426,073,000,000 cubic feet (rank, 5th); crude petroleum, 92,383,000 barrels (rank, 15th).
Foreign Trade (1964): *Exports*, $1,000,000,000 (chief exports, 1963: cereals, cement, machinery, petroleum and products); *imports*, $1,168,000,000 (chief imports, 1963: coke, iron ore, machinery). *Chief trading partner* (1963): USSR (took 45% of exports, supplied 39% of imports).
Transportation: *Roads* (1963), 7,159 miles; *motor vehicles* (1963), 51,700 (automobiles, 14,500); *railways* (1963), 6,838 miles; *merchant vessels* (1964), 20 (90,000 gross registered tons); *state airline*, Tarom; *principal airport*, Bucharest.
Communications: *Telephones* (1964): 376,700; *television stations* (1964), 8; *television sets* (1964), 320,000; *radios* (1962), 2,372,000; *newspapers* (1962), 33 (daily circulation, 3,150,000).

Rumanian Workers' party in July) was Nicolae Ceauşescu (pronounced chow-shess'coo), a 47-year-old party official of peasant origin.

Party Congress. Before the 9th party congress was held on July 19–23, party rules were liberalized to give seniority of membership to former Socialists and to those who had struggled against the pre-Communist regime but had not joined the party until after the Communist takeover. At the congress itself, which Soviet Communist party leader Leonid Brezhnev and Chinese delegates attended, Rumania was declared a "socialist republic," replacing the term "people's republic." Ceauşescu stressed increased industrialization as the only way to ensure independence, national sovereignty, equal rights among nations, and noninterference in internal affairs by other countries. Rumania would remain in COMECON (the Communist bloc's equivalent of the Common Market) on its own conditions, but would continue to develop economic relations with other states regardless of their social systems.

The party also authorized a realistically slower pace for the new five-year plan (1966–70) in order to guarantee a 65% increase in output by that date, and a reduction in the strength of the armed forces, which may weaken the tottering Warsaw Pact (the Communist counterpart of NATO). Before the congress adjourned, it approved a policy of less rigid supervision of intellectual activities. The party also approved the draft of a new state constitution, which the assembly ratified in August.

Foreign Relations. Rumanian leaders visited the Soviet Union in September to hear Brezhnev concede all the main points over which former Premier Khrushchev had quarreled with the Rumanians. The Rumanians also visited Bulgaria and were accorded similar support. Thus Rumania, enjoying the highest rate of industrial development in eastern Europe, secured approval of its independent line, which may lead it out of the Soviet bloc and into a status comparable to that of Tito's Yugoslavia.

In January the Firestone Rubber Co. and Universal Oil Products Corp. arranged to construct a synthetic rubber plant and a catalytic petroleum-cracking unit in Rumania—a venture that would have been the first entry of American industry into a Communist-controlled country since 1941. However, Firestone backed out in July after the Goodyear Rubber Co. and the conservative Young Americans for Freedom undertook a campaign to wreck the plan.

SHERMAN D. SPECTOR
Associate Professor of History
Russell Sage College

RURAL ELECTRIFICATION ADMINISTRATION. See AGRICULTURE—*Farm Services.*

RUSK, (David) Dean

U.S. secretary of state: b. Cherokee County, Georgia, Feb. 9, 1909.

To Dean Rusk and the Department of State in 1965 fell the wearisome and often frustrating tasks of explaining U.S. policy in Vietnam and of seeking an indication that the Communists were interested in negotiating an end to the war there.

Vietnam. Although the Johnson administration remained firm in its resolve to avert a Communist takeover in South Vietnam, its policies vacillated between accelerating the war and seeing negotiations.

SECRETARY OF STATE RUSK (left) confers with Soviet Foreign Minister Gromyko in New York on October 1. The war in Vietnam strained U.S.-Soviet relations in 1965.

UPI

As a result, Secretary Rusk often saw his statements contradicted by events. On January 3 he said that the United States planned no major expansion of the war, but the conflict escalated throughout the year. On February 25 he said that the United States would not negotiate until North Vietnam indicated that it was "prepared to stop what it is doing," but six weeks later President Johnson called for "unconditional discussions." On April 17, Rusk joined the president in defending U.S. air strikes in Vietnam, asserting that "our best judgment tells us [that a halt in the bombings] would only encourage the aggressor and dishearten our friends. . . ." A month later the United States briefly halted the bombings as a gesture for peace.

When college professors and students protested U.S. "aggression," Rusk called their arguments "nonsense." He deplored "the gullibility of educated men and the stubborn disregard of plain facts. . . ." When it was revealed in November 1965 that the United States had passed up a chance to negotiate with North Vietnam in 1964, Rusk replied that the "so-called feelers" were aimed only at permitting the United States to leave Vietnam under face-saving circumstances, and that "we are not interested in saving face but in saving South Vietnam."

Rusk apparently was pessimistic about chances for successful negotiations. He felt that the central issue was not easily negotiable: "Hanoi either leaves South Vietnam alone or does not."

North Atlantic Treaty Organization. In a speech on March 6, Rusk indicated that he hoped western Europe would assume a greater share of the burdens and responsibilities of NATO defense. At a NATO meeting in London in May, Rusk sought support for U.S. military activities in Vietnam, but French opposition prevented a reference to Vietnam in the final communiqué. On December 14, Rusk told NATO delegates in Paris that the war was important to them because the Communists, if successful in Asia, might seek new adventures elsewhere.

Latin America. The U.S. intervention in the Dominican Republic revolt stirred widespread criticism in Latin America. Rusk proposed on May 8 that the Organization of American States create a standby force that could act promptly in any future emergency. At the Special Inter-American Conference in Rio de Janeiro in November, Rusk renewed his call for a permanent inter-American peacekeeping force.

Schlesinger's Memoirs. In 1965, Arthur M. Schlesinger, Jr., a historian and an assistant to President John Kennedy, published his account of the Kennedy administration, *A Thousand Days.* He wrote that Kennedy had planned to dismiss Rusk after the 1964 election. Schlesinger was critical of Rusk, writing that his mind, "for all its strength and clarity, was irrevocably conventional," and that he lived under fear of inadequacy and humiliation.

Many persons contended that Schlesinger had undermined Rusk's effectiveness at a time when he was engaged in delicate diplomatic activities. President Johnson quickly praised Rusk, who refused to be drawn into a dispute with Schlesinger. But he did note, on August 13, that recent criticism of the State Department dealt with its alleged lack of daring and imagination: "Now there are times when some wish us to act with more drama, but there are problems about dramatizing issues, if drama gets in the way of settlement. . . . The department's purpose is to try to bring about what some people will call a boring situation, that is, a period of peace."

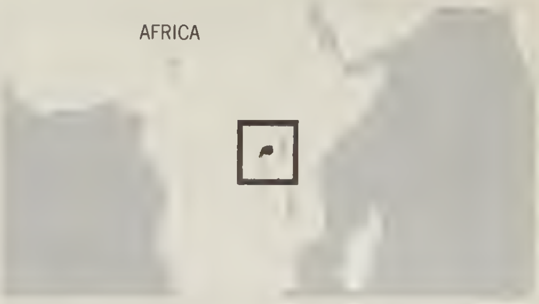
(See also FOREIGN POLICY, U.S.)

RUSSELL, Bill. See biographical sketch under SPORTS.

RUSSIA. See UNION OF SOVIET SOCIALIST REPUBLICS.

RUSSIAN LITERATURE. See SOVIET LITERATURE.

RWANDA



RWANDA · Information Highlights

Area: 10,169 square miles.
Population: 3,018,000 (June 30, 1964, est.).
Chief City (1964 est.): Kigali, the capital, 7,000.
Government: *President and Premier*—Grégoire Kayibanda (took office Oct. 9, 1961). *Parliament*—National Assembly, 44 members; party seating (1965)—Parmehutu, 35; others, 9.
Religious Faiths: Roman Catholics, 30% of population; others, including tribal religions, 70%.
Education: *Total school enrollment* (1962–63)—319,495 (primary, 315,852; secondary, 3,475; higher, 168).
Finance (1963): *Revenues,* $9,420,000; *expenditures,* $13,120,000; *monetary unit,* RB franc (50 francs equal U.S.$1).
Gross National Product (1962): $114,000,000.
Crops (metric tons, 1962–63 crop year): Sweet potatoes (1963–64), 421,000; cassava, 290,000; dry beans, 170,000; dry peas, 39,000.
Minerals (metric tons, 1964): Tin, 1,707 (ranks 10th among world producers); amblygonite (lithium), 295; beryl (1963), 228; tungsten, 48; columbium and tantalum (1963), 30; gold, 500 troy ounces.
Foreign Trade (1962): *Exports,* $21,000,000 (chief exports: coffee, $12,384,000; cassiterite, $3,590,000; cotton and cottonseed oils, $1,272,000); *imports,* $36,000,000 (chief imports: clothing and textiles, $7,652,000; foodstuffs, $7,408,000; fuels and lubricants, $3,344,000). *Chief trading partners* (1960): Tanganyika (took 51% of exports, supplied 7% of imports); Belgium (took 31% of exports, supplied 21% of imports); U.S. (took 13% of exports, supplied 10% of imports).
Transportation: *Roads* (1963), 3,362 miles; *motor vehicles* (1963), 4,698 (automobiles, 2,841); *principal airport,* Kigali.
Communications: *Telephones* (1964): 712.

The political situation in Rwanda was relatively peaceful during 1965 following counterrevolutionary attempts against the government in 1964 by the dispossessed Watusi (or Tusi) aristocracy.

Refugee Problem. More than 200,000 Watusi refugees from Rwanda live in neighboring countries. Those in the Congo who were believed to have supported the rebellion of 1964 were threatened with expulsion by the Léopoldville government if they did not cease agitating against the Rwanda government. In accordance with a suggestion by the United Nations High Commissioner for Refugees, the government in Léopoldville agreed to have some 3,000 of the exiles resettled in Tanzania.

Foreign Relations. Rwanda retained a decidedly pro-Western foreign policy. Nevertheless, it relaxed its rigid anti-Communist position by establishing diplomatic relations on the ambassadorial level with Poland and Rumania. At the same time, Rwanda remained on excellent terms with Nationalist China, which offered technical aid for agricultural development. Most of Rwanda's foreign aid, however, came from Belgium, West Germany, and France.

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RYUKYU ISLANDS. See PACIFIC ISLANDS.

UPI

GATEWAY ARCH, designed by Eero Saarinen, symbolizes St. Louis' role as gateway to the West in the nation's westward movement. Keystone section, lifted into place on Oct. 28, 1965, completed the 630-ft. steel arch.

SABAH. See MALAYSIA.
SAFETY. See INDUSTRIAL HEALTH AND SAFETY.
SAILING. See SPORTS—YACHTING.
SAINT HELENA. See COMMONWEALTH OF NATIONS.

ST. LOUIS

St. Louis (1965 est. pop.: city, 710,000; metropolitan area, 1,690,000) continued to celebrate its 200th anniversary in 1965 and completed the commemorative Gateway Arch on the riverfront. St. Louis voters made six separate trips to the polls during the year. They chose a new city administration, defeated and then passed a major increase in the tax levy for schools, registered opinions on three state constitutional amendments, and approved a bond levy for the district junior colleges.

Gateway Arch. The highlight of the St. Louis bicentennial celebration was the completion on Oct. 28, 1965, of the 630-foot Gateway Arch on the Mississippi riverfront. Designed by the late Eero Saarinen, the steel arch commemorates the Louisiana Purchase and the westward expansion movement. It is part of the Jefferson National Expansion Memorial, a 40-block area on the city's riverfront.

The Spanish Pavilion of the New York World's Fair will be brought to the city and reconstructed near the arch. The transporting of the pavilion will be financed by private contributions, and the building will be managed by a private foundation.

Elections. In city primary elections held in March, Alfonso J. Cervantes, former president of the board of aldermen, defeated incumbent Mayor Raymond Tucker for the Democratic nomination for mayor. Tucker, who had been mayor of St. Louis since 1953, was seeking an unprecedented fourth term. In the April general election, Cervantes defeated the Republican nominee by a margin of 99,869 to 47,179. Democratic candidates also won all contested seats for the board of aldermen.

City voters were twice asked to grant approval to proposed tax increases to help finance the city's school system. On May 11, city voters failed to grant approval to a tax proposal, leaving city schools with a potential financial crisis. A second proposal, presented to the voters in June, was approved. Voters in the St. Louis area, in a special election on November 16, approved a $47,200,000 bond issue for the construction of permanent facilities for the three St. Louis District junior colleges.

Higher Education. The two private universities in the city received multimillion dollar awards from the Ford Foundation. St. Louis University received a $5 million unrestricted grant, and Washington University was awarded a $15 million gift, the third largest ever awarded any educational institution by the foundation.

In January, Washington University initiated a major fund-raising drive to obtain by 1970 a total of $70 million for scholarships and other purposes.

Cultural Events. The bicentennial celebration brought the city an unusually busy cultural schedule. Special events included performances in St. Louis by the Metropolitan Opera Company and the New York City Ballet. In October, Shaw's Garden was the scene of an outside display of sculpture, featuring pieces from local collections. The 1965–66 season of the St. Louis Symphony was temporarily delayed by a wage dispute between players and management. The season was temporarily cancelled, but finally got under way on November 6.

Public Finance. The city budget for the 1964–65 fiscal year called for expenditures of $79,494,152. St. Louis' long-term debt (1965) was $122,369,000, and the city tax rate (1965) was $4.85 per $100 assessed valuation. In June 1965, the consumer price index was 110.2 (1957–59=100).

Richard E. Dawson
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SAINT PIERRE AND MIQUELON. See France.

SALES. See Economic Review; Retail Store Sales; Wholesale Selling.

SALVATION ARMY

In 1965 the Salvation Army maintained operations in 69 countries and geographical areas, and preached the Gospel in 142 languages. There were 25,418 commissioned officers, 1,696 cadets, 31,684 full-time employees, and about 1 million soldiers, or lay members. General Frederick Coutts, international leader, directed operations from his headquarters in London.

The Salvation Army's worldwide services in 1965 included 142 hospitals, dispensaries, and clinics, which treated 166,528 inpatients and 756,205 outpatients; 927 day schools, which taught 129,636 pupils; and several employment bureaus, which placed 162,379 applicants in jobs. In addition the Salvation Army operated 154 children's homes and 86 homes for unwed mothers, 205 shelters and workshops for men, 134 goodwill centers and slum posts, 6 leprosariums, and 10 institutes for the blind.

Under the command of Commissioner Holland French, the Salvation Army in the United States had four regional commissioners in 1965: William Davidson (Eastern); Samuel Hepburn (Central); Paul J. Carlson (Southern); and Glenn Ryan (Western). There were 8,650 centers of operation in the United States. These centers, administered by 5,087 officers and employing 14,318 persons, included 6,463 service extension units.

The Salvation Army's social institutions included 127 treatment centers aiding 63,577 homeless men; 58 camps affording camping experiences for 25,257 children and adults; and 15 Evangeline residences providing homes for businesswomen. The 287 boys' and girls' clubs and community recreation centers had a total attendance of 7,571,493. The Salvation Army also furnished care for 16,735 unwed mothers in 34 homes and hospitals, for 18,257 patients in general hospitals or related institutions, and for 39,313 outpatients.

A Centenary Congress convened in London in June 1965 to celebrate the 100th anniversary of the founding of the Salvation Army. A U.S. postage stamp issued in July honored the centennial.

John Grace
National Chief Secretary
The Salvation Army

SAMOA. See Pacific Islands; Western Samoa.

SAN FRANCISCO

San Francisco (1965 est. pop.: city, 756,900; metropolitan area, 3,000,000) struggled in 1965 with the transportation and urban development problems characteristic of a fast-changing city.

Transportation. Contracts were let to build the first units of the $1 billion Bay Area Rapid Transit project. The 75-mile system of surface lines and subways, including a 6½-mile tunnel beneath the bay, will link San Francisco and the east bay communities with frequent, fast interurban trains. The first trains are expected to begin operating early in 1970, and the entire system is scheduled for completion in 1971.

Plans to relieve mounting congestion in downtown streets were again delayed by the failure of the Board of Supervisors and the State Highway Commission to agree on the location and design of projected freeways. The controversial freeways, which will be financed in part by the state gasoline tax, are intended to speed the movement of vehicles within the city by diverting through traffic from the crowded downtown area.

Urban Development. Work on the city's urban development program continued throughout the year. Three lofty apartment buildings, with some 700 living units, were completed in the Golden Gateway Center, which occupies the former wholesale produce district. Work began on another Golden Gateway structure, the 25-story Alcoa office building and its adjoining plaza, shops, and garage. The entire Golden Gateway project, representing an investment of $85 million, is expected to be completed in 1968.

Other Construction. Although new construction tapered off slightly during 1965, particularly in residential areas, building activity was noticeable throughout the financial district. The newest addition is the 43-story head office of the Wells Fargo Bank. The building will be ready for occupancy in the fall of 1966. In July the Bank of America made public its plans for a new world headquarters building. Work on this 52-story structure, which will be the tallest building on the west coast, will begin early in 1966.

Newspaper Merger. A major change in the city's newspapers took place in mid-September when the *Examiner*, the original unit of William Randolph Hearst's newspaper empire, abandoned the morning field to its longtime rival, the *Chronicle*. The *Examiner* was consolidated with the Hearst-owned afternoon paper, which became the *Examiner, News Call Bulletin*. Thus, for the first time in well over a century, the city had only two daily papers of general circulation. The two papers publish a joint Sunday edition, the *Examiner & Chronicle*.

Municipal Election. In the municipal election on November 2, in which only 61.5% of the registered voters participated, the five city supervisors whose four-year terms were expiring were reelected. Of seven city propositions on the ballot, all but one were rejected by the voters. The exception was Proposition A, which authorized a bond issue of $33.67 million for a new medical center to replace the San Francisco General Hospital.

The most hotly contested issue of the campaign was Proposition B, which would have authorized a $29 million bond issue to rehabilitate the city-owned Opera House and Veterans Memorial Building and to build a new musical arts center. The measure fell far short of the two-thirds majority needed for passage.

Finances. For the 1965–66 fiscal year, the tax rate on real and personal property was $10.168 per $100 assessed valuation—an increase of $0.94 over the 1964–65 rate. Of the tax rate, $7.24 was for general municipal expenses and $2.82 went for support of the city schools. The budget for fiscal 1966 was set at $383,350,102—a slight increase over the previous year's budget.

Unemployment. In 1964, unemployment averaged 5.3% of the civilian work force.

Oscar Lewis
Co-editor, "A History of San Francisco"
Author, "The Big Four" and other books

SANCHEZ VILELLA, Roberto. See biographical sketch under Puerto Rico.

SANITARY ENGINEERING. See Pollution; Water Supply.

SARAWAK. See Malaysia.

SASKATCHEWAN

While the economy made notable gains during 1965, it was the celebration of Saskatchewan's diamond jubilee of admission to confederation that highlighted provincial news during the year.

Jubilee. Festivities were organized by a corporation that promoted activities recalling provincial history and honoring Saskatchewan's pioneers. These included competitions to select outstanding pioneers and choose a jubilee flag, district talent contests, with winners competing for final honors at Regina and Saskatoon, production of a film on the province, and publication of a magazine, pamphlets, and a source book of historical documents. Vacation trails were developed and historic parks were opened at Cannington Manor and Wood Mountain.

Finance. Rising revenues produced a budgetary surplus of almost $8 million as of March 31, 1965, compared with a budgeted surplus of $500,000. The additional funds enabled the provincial government to extend highway building activities and provide tax relief. A $50 grant was promised to each homeowner to ease the heavy burden imposed by local taxation on real estate. In addition, the report of the Royal Commission on Government Administration heralded changes in administrative procedures that are expected to yield large savings as they are introduced.

Economy. The economy continued at unprecedented high levels on the strength of further mineral development. The mining of potash, in particular, yielded 2.6 million tons of muriate valued at $57 million in 1965, compared with 1.4 million tons valued at $30.7 million in 1964. Plans were announced for a new potash development near Saskatoon.

The agricultural outlook was also promising in 1965. After planting was delayed due to spring rains, a heavy wheat crop came quickly to maturity in the August heat, only to be trapped in the fields by one of the earliest snowfalls on record in the province. Good weather returned in early October, however, and most of the grain was harvested without serious damage. As Canada's leading wheat producer, the province profited from continued demand for wheat in international markets.

The reservoir of the South Saskatchewan River Dam project began to fill in 1965, initiating power, irrigation, and recreation development in the area. The dam's vast rolled earth embankment, one of the world's largest, is scheduled for completion in 1966, and the first power will go on line in 1967.

SASKATCHEWAN · Information Highlights

Area: 251,700 square miles.
Population: 953,000 (Oct. 1, 1965 est.).
Chief Cities (1964 est.): Regina, the capital (124,000); Saskatoon (107,900); Moose Jaw (34,800); Prince Albert (26,100); Swift Current (13,000); North Battleford (12,100); Yorkton (10,756).
Government: *Chief Officers*—Lt. gov., Robert L. Hanbidge; premier and prov. treas., W.R. Thatcher (Liberal party); prov. secy. and atty. gen., Darrel V. Heald (L); min. of educ., G.D. Trapp (L); chief justice, E.M. Culliton. *Legislature*—Legislative Assembly (convened Feb. 4, 1965), 59 members (32 Liberals, 25 Cooperative Commonwealth Federation members; 1 Progressive Conservative; 1 vacancy).
Education: *School enrollment* (1963–64 est.)—public elementary and secondary, 225,197 pupils (9,657 teachers); private, 4,665 (276); Indian, 5,165 (219); college and university (1962–63), 7,024 students. *Public school expenditures* (1963)—$96,886,000; average teacher's salary, $5,055.
Public Finance (fiscal year 1965 est.): *Revenues*, $223,020,000 (sales tax, $77,820,000; income tax, $29,801,000; federal funds, $27,873,000). *Expenditures*, $221,590,000 (health and welfare, $87,650,000; education, $57,440,000; transportation and communications, $35,020,000).
Personal Income (1964): $1,587,000,000; average annual income per person, $1,678.
Public Assistance (fiscal year 1965 est.): $17,440,000 (aged and blind, $4,600,000; dependents and unemployed, $8,330,000).
Labor Force (1961 census; agricultural and manufacturing only): *Agricultural*, 119,580; *manufacturing*, 13,208.
Manufacturing (1962): *Value added by manufacture*, $128,359,000 (including transportation equipment, $199,000; nonelectrical machinery, $1,980,000; fabricated metals, $6,386,000; food and products, $52,667,000).
Agriculture (1964 est.): *Cash farm income*, $838,345,000 (livestock, $165,619,000; crops, $670,764,000; government payments, $1,634,000). *Chief crops* (cash receipts)—wheat, $474,065,000 (ranks 1st among the provinces); barley, $20,974,000 (rank, 2nd); flaxseed, $17,389,000 rank, 2nd).
Mining (1964 est.): *Production value*, $279,995,723. *Chief minerals* (tons)—copper, 20,688 (ranks 5th among the provinces); zinc, 28,429 (rank, 7th); cement, 240,000 (rank, 6th); crude petroleum, 81,040,229 barrels (rank, 1st); uranium, 1,792,987 pounds (rank, 2nd); natural gas, 40,941,000 mcf (rank, 4th).
Transportation: *Roads* (1962), 124,066 miles (44,899 paved); *motor vehicles* (1963), 382,190; *railroads* (1963), 8,577 miles; *airlines* (1963), 3 (33 airports).
Communications: (1963): *Telephones*, 215,436; *television stations*, 6; *radio stations*, 16; *newspapers*, 4 (daily circulation, September 1964, 116,778).

Urban Renewal. Saskatoon is one of the first Canadian cities to have the opportunity to rebuild its downtown area. The Canadian National Railway yards are being removed, leaving a large area for development as an urban center, to include new buildings, a freeway, and parks.

Regina's building activity centered in Wascana Centre. Two University of Saskatchewan buildings for its Regina campus were completed, and the library—feature building of the Regina campus—was begun. Ground was broken also for a centennial auditorium.

Politics. In the only by-election of the year, the Liberals retained the Moosomin seat vacated when A.H. McDonald, former deputy premier and provincial minister of agriculture, was appointed to the federal Senate. A further by-election loomed with the death of Sam Asbell, member of the Legislative Assembly for Bengough, on October 10.

Garth Blue
Reference Librarian
Saskatchewan Legislative Library

SATELLITES, Earth. See Space Exploration.

SATO, Eisaku. See biographical sketch under Japan.

SAUDI ARABIA

Saudi Arabia made notable progress in both the foreign and domestic fields in 1965, the first full year of King Faisal's reign. An agreement with the United Arab Republic (Egypt) for settling the Yemeni civil war appeared to have some chance for success, thereby strengthening Saudi Arabia's position on the international scene. Economic development augured well for the future at home.

Yemeni Civil War. After the failure of the attempt in 1964 by Saudi Arabia and Egypt to settle the Yemeni problem, relations between the two countries deteriorated. In July and early August 1965 they openly threatened to go to war. This trend was reversed in late August, however, when President Gamal Abdel Nasser of Egypt met with King Faisal in Jiddah. The two leaders concluded a new agreement for a cease-fire embracing two points considered essential by Saudi Arabia: the withdrawal of the whole Egyptian expeditionary force from Yemen, and the holding of a national plebiscite there, with the Royalists participating on an equal basis with the Republicans. (See YEMEN.)

Economic Development. Saudi Arabia's budget for the fiscal year beginning in October 1965 was balanced at $800 million, for an increase of $188 million over the previous fiscal year. About $77 million of the increase came from unspent funds allocated previously, and from other sources not connected with regular revenues. Also, nearly $48 million came from a royalty agreement signed with the Arabian American Oil Company (Aramco) in January. Funds allocated for development projects amounted to about $370 million. (Unlike other developing countries, Saudi Arabia depends largely on its own resources rather than on aid from abroad.)

Diversification of the nation's economy was promised by a contract with an American company for building an ammonia plant costing $20 million, and by a contract with an Italian concern to make preparatory studies for a plastics plant costing about $55 million. An oil concession for areas in the Red Sea was granted to a French company on terms favorable to Saudi Arabia.

The roadbuilding program, particularly important for a country with such great distances and rugged terrain, moved ahead. The most spectacular achievement in the area was the completion of a road linking Mecca with Taif, the summer capital in the mountains above the Red Sea. The project, with 103 bridges, cost more than $40 million.

Because Saudi Arabia is mainly a desert land in desperate need of water, the government retained American and French companies to carry out extensive hydrological surveys. A French company was hired to explore for minerals other than oil.

New Crown Prince. Ex-King Saud pledged allegiance to King Faisal in January and then left the kingdom, apparently to reside abroad. In March the government achieved greater stability when King Faisal appointed his younger half-brother, Prince Khalid (born 1913), as heir apparent. The appointment was ratified by popular approval. Prince Khalid is also deputy prime minister.

Boundaries. Saudi Arabia, which has long been plagued with boundary problems on almost every frontier, took steps in 1965 to settle some of these questions. One agreement gave Jordan a somewhat longer stretch of coast south of ʻAqaba in return for concessions of territory in the interior to Saudi Arabia. An agreement with Iran fixed a median line in the Persian Gulf in regard to resources in the seabed. An agreement with Qatar set mainland and offshore boundaries.

Saudi Arabia and Kuwait partitioned the Neutral Zone between them for administrative purposes, but arrangements for equal profits from the zone's mineral resources remained unchanged. The agreement on the Neutral Zone, however, did not settle the offshore boundary or the sovereignty over islands near the zone.

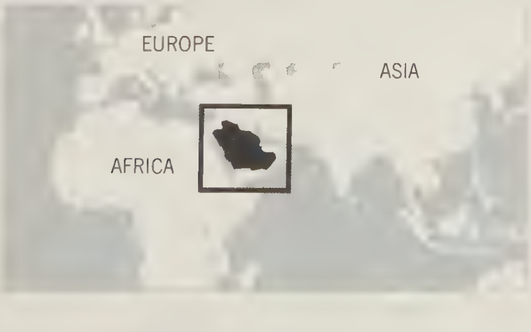
In the east, Saudi Arabia's dispute with Muscat and Oman and with Abu Dhabi over the Buraimi Oasis and adjacent territories continued. However, Saudi Arabia's improved relations with Britain, the strong supporter of Muscat and Oman and Abu Dhabi, indicated that an accommodation might be reached. The boundary with the British Protectorate of South Arabia was still undefined.

GEORGE RENTZ
Curator, Middle East Collection
The Hoover Institution, Stanford University

SAVINGS. See BANKING.

SCHOOLS. See COLLEGES AND UNIVERSITIES; EDUCATION; and the *Information Highlights* tables of articles on countries and states.

SAUDI ARABIA · Information Highlights



Area (est.): 800,000 square miles.
Population: 6,630,000 (mid-1964 est.).
Chief Cities (1962–63 municipal census): Riyadh, the capital, 169,185; Mecca, 158,908; Jiddah, 147,859.
Government: *King*—Faisal ibn Abd al-Aziz (acceded 1964). *Council of Ministers,* 13 members.
Religious Faiths: Muslims, 99% of population; others, 1%.
Education: *Total school enrollment* (1962)—161,050 (primary, 137,946; secondary, 11,636; teacher-training, 5,716; technical, 3,863; higher, 1,889).
Finance (1965 fiscal year): *Revenues,* $692,000,000; *expenditures,* $692,000,000; *monetary unit,* riyal (4.50 riyals equal U.S.$1).
Gross National Product (1963 est.): $1,120,000,000.
Economic Index (1964): *Petroleum production,* 180 (1958=100).
Manufacturing (barrels, 1964): Distillate and fuel oils, 70,065,000; gasoline, 13,537,000; jet fuel, 6,159,000; cement, 240,000 metric tons.
Chief Crop (1963–64): Dates, 283,000 metric tons (ranks 3rd among world producers)
Minerals (metric tons, 1963): Crude petroleum (1964), 628,095,000 barrels (ranks 5th among world producers); gypsum, 36,000; salt, 10,000; lime, 6,400.
Foreign Trade: *Exports* (1964), $1,180,000,000 (chief exports, 1963: crude petroleum, $788,200,000; petroleum products, $158,000,000); *imports* (1963), $320,000,000 (chief imports, 1962: textiles and clothing, $28,200,000; motor vehicles, $15,600,000; rice, $12,700,000). *Chief trading partners* (1962): U.S. (took 8% of exports, supplied 20% of imports); Lebanon (took 10% of exports, supplied 8% of imports); Bahrain (took 12% of exports, supplied 4% of imports).
Transportation: *Roads* (1964), 8,152 miles (2,684 paved); *motor vehicles* (1964), 68,414 (automobiles, 37,025); *railways* (1963), 356 miles; *merchant vessels* (1964), 11 (38,000 gross registered tons); *government airline,* Saudi Arabian Air Lines; *principal airports,* Dhahran, Jiddah, Riyadh.
Communications: *Telephones* (1964), 26,500; *television stations* (1964), 2; *television sets* (1964), 30,000; *radios* (1964), 1,000,000; *newspapers* (1962), 2 (daily circulation, 14,000).

SCHWEITZER, Albert

Alsatian Nobel Peace Prize-winning philosopher, physician, theologian, teacher, and organist: b. Kaysersberg, Alsace, Jan. 14, 1875; d. Lambaréné, Gabon, Sept. 4, 1965.

The guiding principle of Albert Schweitzer the philosopher was: "I am life that wills to live in the midst of other life that wills to live." His ethical principle was Reverence for Life—a boundless system of ethics, embracing all forms of life, high and low.

In January 1965 the world celebrated with him his 90th birthday. His hospital at Lambaréné, Gabon, was treating over 7,000 patients a year and caring for an additional 200 lepers in a nearby leper village. Before he died, he made known his wishes concerning the running of the hospital after his death, thus ensuring that his life's work at Lambaréné would go on.

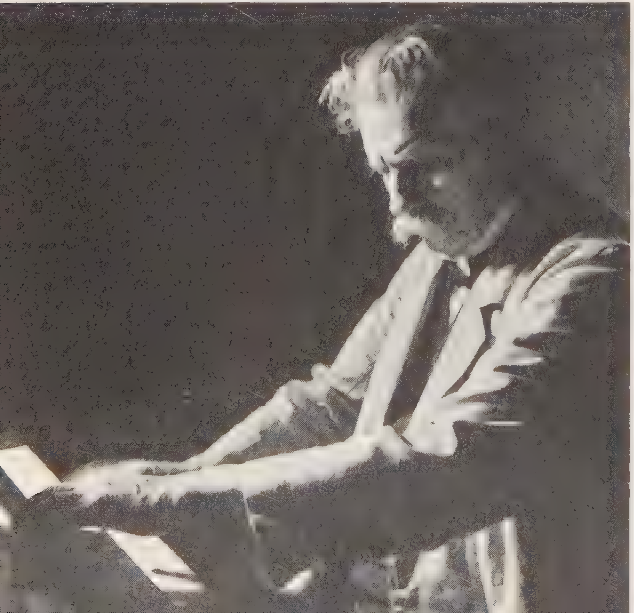
Early Life. Albert Schweitzer was the son and grandson of preachers. With a family tree full of musicians, teachers, and pastors, the child seemed destined to enter one of these professions. In the end he entered all three, and became a physician as well. He learned to play the piano in his father's parsonage and the organ in his father's church. At Mulhouse, where Schweitzer attended the *gymnasium*, Eugène Munch, the father of conductor Charles Munch, introduced him to the organ music of Johann Sebastian Bach.

Schweitzer spent a few weeks in Paris in 1893, taking organ lessons from the great organist and composer, Charles Marie Widor. Later in the year he entered the University of Strasbourg to study theology and philosophy. In theology he investigated the significance of the Last Supper. In philosophy he was primarily interested in Immanuel Kant.

After a year at the Sorbonne in Paris and another at the University of Berlin, he took his Ph.D. in philosophy (1899) and his licentiate in theology (1900) at the University of Strasbourg. Ordained a curate in the Church of St. Nicholas in Strasbourg in 1900, he was appointed principal of the University of Strasbourg's Protestant Theological Seminary in 1903.

ALBERT SCHWEITZER THE MUSICIAN was recognized as a world authority on the life and music of Johann Sebastian Bach and a skilled interpreter of Bach's organ music.

COLUMBIA RECORDS



His first important books included *The Religious Philosophy of Kant* (1899) and *The Mystery of the Kingdom of God* (1901). With the encouragement of Charles Widor he wrote *J.S. Bach, the Musician-Poet* (1905), and an enlarged version of the same book in German, *Johann Sebastian Bach* (1908).

Medical Student. Schweitzer had decided as early as 1896 that when he reached the age of 30 he would begin to devote his life to the service of humanity. When his 30th birthday came (1905), he revealed his intention to become a missionary doctor in Africa. He entered the University of Strasbourg medical school in 1905, but remained curate of St. Nicholas' Church and continued to study the history of early Christianity. His *Quest of the Historical Jesus* (1907) brought him a measure of fame, and was followed by *Paul and his Interpreters* (1911).

He made many European concert tours as an organist while he was a medical student. His *German and French Organ Building and Organ Playing* (1910) revealed his mastery of that difficult instrument.

First African Mission. On June 18, 1912, Schweitzer married Hélène Bresslau, the daughter of a Strasbourg historian. In 1913 he received his medical degree, and on Good Friday of that year, he and his wife set out from his childhood home in Günsbach for a life of service in Africa. With the money he had earned from his concerts and books, he founded a hospital at the Lambaréné station of the Paris Missionary Society on the Ogowé River in the jungles of French Equatorial Africa. His work began in an old chicken house; at the end of a few months he was treating as many as 40 patients a day in this improvised hospital. With the outbreak of World War I, the Schweitzers, because they were German citizens, were first placed under house arrest, then sent back to Europe to be interned.

Postwar Period. After the war ended, Schweitzer toured Europe giving concerts and lectures to finance his work in Africa. He continued his writing, bringing out the first two volumes (1923) of his major philosophical work, *Philosophy of Civilization.* He also worked on books that were not published until later, including *The Mysticism of Paul the Apostle* (1930) and *Indian Thought and Its Development* (1934).

Return to Africa. On April 19, 1924, Schweitzer reopened his hospital in Lambaréné. It soon proved to be too small and had to be rebuilt at a new location upstream. Eventually, the hospital complex was to contain more than 70 buildings, with doctors and nurses from many countries on its staff.

In Africa, Schweitzer began to write the autobiographical books on which much of his literary fame is based: *On the Edge of the Primeval Forest* (1921), *Memoirs of Childhood and Youth* (1924), *More From the Primeval Forest* (1931), and *From My African Notebook* (1938).

Last Years. Schweitzer's closing years were marked by the many distinctions heaped upon him—honorary degrees, medals, and prizes. In 1953 he was awarded the 1952 Nobel Peace Prize (originally no prize was awarded for 1952). His Nobel acceptance speech, *The Problem of Peace in the World Today* (1954), warned that man is becomingly increasingly inhuman and that "the horror of this . . . must arouse us out of our stupor so we can direct our wills and our hopes" toward the abolition of war.

In his later years he gave up surgery because of poor eyesight, but he continued his administrative

PIX

ALBERT SCHWEITZER THE HUMANITARIAN gave his medical skill to the people of Africa in the hospital he started at Lambaréné (Gabon) in 1913.

duties to the end. Increasingly in these closing years, Schweitzer, especially sensitive to the terrible menace of nuclear warfare, devoted himself to the cause of peace.

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CHARLES RHIND JOY
Editor of "Albert Schweitzer, An Anthology"

SCIENCE. See articles on the various sciences: ASTRONOMY, CHEMISTRY, PHYSICS, etc.

SCOTLAND. See COMMONWEALTH OF NATIONS.

SCULPTURE. See ART.

SECURITIES AND EXCHANGE COMMISSION. See STOCKS AND BONDS.

SECURITY, National. See NATIONAL DEFENSE.

SEGREGATION, Racial. See CIVIL RIGHTS; EDUCATION; LAW; UNITED STATES.

SEISMOLOGY. See EARTHQUAKES.

SELECTIVE SERVICE

On July 28, 1965, President Johnson announced that draft calls would be increased to 35,000 a month. Both a decline in enlistments and an increased need for men to build up United States forces in Vietnam made this move essential. From November 1964 through December 1965, the number of inductees reached 258,214. For the first time since 1955 the Navy requisitioned men through Selective Service, asking for 4,600 in October. The Marine Corps requested 4,050 inductees in November and 5,024 in December—the first Marine draft calls since the Korean War.

As of midnight, Aug. 26, 1965, a new regulation put men 19 to 26 years of age who married after August 26 in the same category as single men aged 19 to 26. The status of men in this group who had married before August 26 was not immediately affected. They will be notified for induction only if the quota cannot be met with single men or men 19 to 26 years old who married after Aug. 26, 1965.

Inductions since 1948 totaled 3,326,074, including Department of Defense requisitions through October 1965. Of these, 3,209,076 were inducted into the Army, 84,365 into the Marine Corps, 32,164 into the Navy, 413 into the Air Force, and 56 into the Coast Guard.

Men are registered by the Selective Service at age 18, classified as to availability for military service, and selected to fill calls issued by the Department of Defense. Exemptions are provided for ministers, divinity students, some aliens, and sole surviving sons. Those disqualified for any military service are placed in Class IV-F; those qualified only in case of war or a national emergency, in Class I-Y. Temporary deferments are permitted under special circumstances—for example, satisfactory participation in the Army Reserve or the National Guard, or engagement in study or other civilian activities vital to the nation.

The U.S. Selective Service has centers in each state, and in New York City, the District of Columbia, Guam, Puerto Rico, the Virgin Islands, and the Canal Zone. About 40,000 volunteers man the nearly 4,000 local boards.

LEWIS B. HERSHEY
Lieutenant General, U.S. Army;
Director, Selective Service System

SENANAYAKE, Dudley. See biographical sketch under CEYLON.

SENATE, U.S. See CONGRESS; UNITED STATES.

SENEGAL

ASIA
S. AMERICA
AFRICA

France's decision in 1964 to stop buying Senegal's peanut crop at subsidized prices helped to account for the country's depressed economic state in 1965. A threat to national security by armed Communist guerrillas was put down with their arrest and public conviction.

Economy. Even though France agreed in 1964 to a one-year extension of its subsidy on peanut prices, the knowledge that France would not continue to pay more than world market prices had a depressing effect on the Senegalese economy. The atmosphere of economic deterioration was increased by a reduction of French troops stationed in Senegal and an accompanying closing of support facilities, and by the exodus of French shopkeepers catering to the military. In the face of decreasing tax receipts, the government announced an austerity program and a second four-year development plan, emphasizing crop diversification and a tightening of administrative costs.

SENEGAL · Information Highlights

Area: 75,750 square miles.
Population: 3,400,000 (July 1, 1964, est.).
Chief Cities (1963 est.): Dakar, the capital, 382,980; Kaolack, 81,631; Thiès, 69,000; Saint-Louis, 58,000.
Government: *President*—Léopold Sédar Senghor (took office Sept. 5, 1960); *Parliament*—National Assembly, 80 members, all belonging to the Senegal Progressive Union.
Religious Faiths: Muslims, 90% of population; Roman Catholics, 5%; others, 5%.
Education: *Literacy rate* (1961)—6% of population aged 14 and over. *Total school enrollment* (1962)—192,249 (primary, 172,751; secondary, 13,149; technical, 4,343; higher, 2,006).
Finance (1963–64): *Revenues*, $134,000,000; *expenditures*, $126,000,000; *monetary unit*, CFA franc (246.85 CFA francs equal U.S.$1).
Economic Indexes (1964): *Industrial production*, 139 (1958=100); *cost of living*, 124 (1958=100).
Manufacturing (metric tons): Cement (1964), 205,000; wheat flour (1961), 105,000; meat (1963), 31,000; cotton yarn (1964), 360; beer (1963), 108,700 hectoliters.
Crops (metric tons, 1963–64 crop year): Peanuts (1964–65), 990,000 (ranks 4th among world producers); cassava, 153,000; palm kernels, 5,500; bananas, 4,000.
Minerals (metric tons): Phosphate rock (1964), 798,000; zirconium (1963), 3,069; titanium concentrates (1964), 1,928; crude petroleum (1962), 3,000 barrels.
Foreign Trade (1964): *Exports*, $123,000,000 (chief exports: peanuts and peanut oil, $95,300,000); *imports*, $172,000,000 (chief imports, 1963: woven cotton fabrics, $15,000,000; rice, $11,000,000; sugar and honey, $10,000,000). *Chief trading partners* (1963): France (took 86% of exports, supplied 63% of imports); West Germany (took 2% of exports, supplied 5% of imports); U.S. (took 0.1% of exports, supplied 4% of imports).
Transportation: *Roads* (1964), 8,080 miles (755 paved); *motor vehicles* (1964), 41,651 (automobiles, 24,973); *railways* (1963), 242 miles; *principal airport*, Dakar.
Communications: *Telephones* (1964), 24,255; *radios* (1963), 150,000; *newspapers* (1963), 1 (daily circulation, 20,000).

Assistance in the agricultural sector will be supplied over the next five years by $46.7 million promised by the European Economic Community to compensate producers and promote crop diversification. The Soviet Union offered credit to assist Senegal in purchasing a tuna fishing fleet and equipment for a tuna cannery. Further hope for future development was seen in the establishment of the Senegal River Valley Commission, which met in March in St.-Louis, Senegal, the organization's headquarters.

In November, the United States agreed to lend Senegal $1.2 million to complete financing of five regional teaching centers, and made a gift of movie projectors for the Dakar Arts Festival.

Domestic Politics. Twenty-seven political subversives were publicly tried and convicted in June for having plotted to overthrow the government. These armed guerrillas were reportedly part of a "small Communist cell" operating under the banned Parti Africain de l'Indépendence (PAI).

Foreign Affairs. Although Senegal and Gambia signed agreements to cooperate in matters of defense and foreign affairs when Gambia received its independence on Feb. 18, 1965, chances of eventual federation between the two countries seemed dim.

On November 9, Senegal and Rumania agreed to establish diplomatic relations.

Senegal has repeatedly complained about border incursions from Portuguese Guinea. On May 19, 1965, the UN Security Council unanimously adopted a resolution asking Portugal to "take all effective actions to prevent any violation of Senegal's sovereignty and territorial integrity."

The number of refugees in Senegal from the Portuguese colony continued to grow in 1965, when they were estimated to number between 40 and 50 thousand. They placed a severe strain on the country's weak economy, despite substantial donations of foodstuffs from the United States and additional assistance from the UN High Commissioner for Refugees in helping Senegal to feed and care for the refugees.

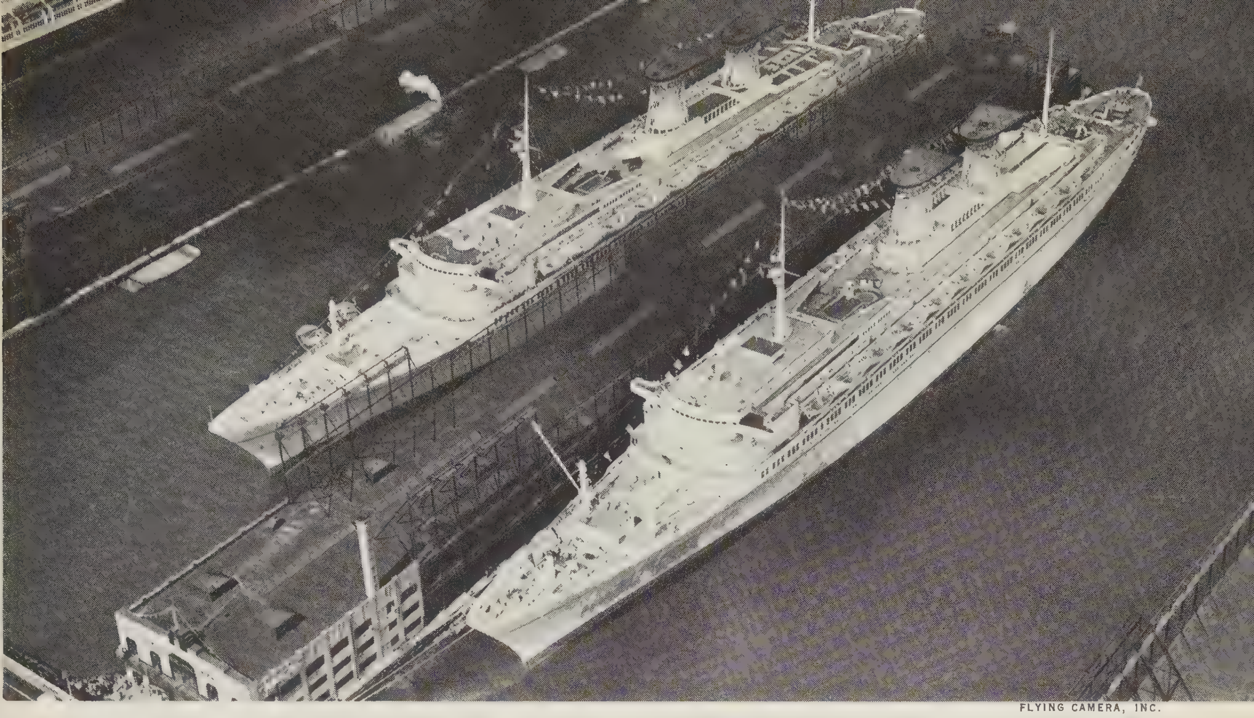
LINDA LOWENSTEIN
Former Associate, African Studies Program
Boston University

SHASTRI, Lal Bahadur. See biographical sketch under INDIA.

SHIPPING

On Jan. 1, 1965, the United States merchant fleet comprised 45,579 documented vessels totaling 26.5 million gross tons (excluding yachts) in river, lake, and harbor service and in oceanborne foreign and domestic trade. Their sizes ranged from five-ton freight boats on the inland waterways to the 65,740-gross-ton S.S. *Manhattan*, one of the world's largest oceangoing tankers. More than half the vessels (about two thirds of the tonnage) were engaged in service from river and ocean ports along the Atlantic and Gulf coasts.

Of the total number of vessels, 16,086 were in the fishing service operating out of ports on the Atlantic, Gulf, and Pacific coasts, northern lakes, and western rivers; 11,516 were in the freight service, of which 3,924 (averaging 640 gross tons) were employed on western rivers; and 5,862 were passenger vessels in service from ports on



FLYING CAMERA, INC.

ITALIAN SISTER SHIPS, the *Michelangelo* (top) and the *Raffaello,* made their maiden transatlantic voyages in 1965 from Genoa, Italy, to New York.

the Atlantic, Gulf, and Pacific coasts, northern lakes, and western rivers.

The U.S. oceangoing fleet of 1,000 gross tons or more comprised 2,529 ships as of Jan. 1, 1965.

Ship Construction. A total of 39 oceangoing merchant ships (of 1,000 gross tons or more) were on order or under construction in the United States on July 1, 1965. Thirty-eight were freighters, and one was a tanker. In addition, ten ships were being built for government account by the Maritime Administration, nine for the Coast and Geodetic Survey, and one for the Military Sea Transportation Service.

The long-range replacement program undertaken by U.S. shipping companies receiving government help totaled some 300 ships to be completed by the late 1970's. By July 1, 1965, 99 ships had been delivered and 38 others were under construction.

The demonstration phase of the nuclear ship *Savannah* was completed in 1965, and arrangements were made to begin commercial operation to evaluate further the ship's performance. Also, research continued to determine the feasibility of employing oceangoing surface-effect ships to transport cargo of high value at speeds of 100 to 150 knots.

U.S. FLAG OCEANGOING MERCHANT FLEET
(1,000 gross tons and over)

	Jan. 1, 1965		Jan. 1, 1964	
	No. ships	Dwt. tons	No. ships	Dwt. tons
United States: Total	2,529	29,632,000	2,656	30,509,000
Combination passenger-cargo	257	1,667,000	285	1,872,000
Freighters	1,846	19,120,000	1,923	19,754,000
Bulk carriers	65	1,118,000	64	1,091,000
Tankers	361	7,727,000	384	7,792,000
Privately-owned: Total	963	14,729,000	974	14,579,000
Combination passenger-cargo	31	272,000	32	284,000
Freighters	579	6,567,000	582	6,499,000
Bulk carriers	64	1,107,000	63	1,080,000
Tankers	289	6,783,000	297	6,716,000
Government-owned: Total	1,566	14,903,000	1,682	15,930,000
Combination passenger-cargo	226	1,395,000	253	1,588,000
Freighters	1,267	12,553,000	1,341	13,255,000
Bulk carriers	1	11,000	1	11,000
Tankers	72	944,000	87	1,076,000

Source: Maritime Administration, U.S. Department of Commerce.

MERCHANT FLEETS OF THE WORLD
(1,000 gross tons and over)

	Jan. 1, 1965		Jan. 1, 1964	
	No. ships	Gross tons	No. ships	Gross tons
World total	18,155	143,675,000	18,033	137,657,000
United States	2,529	21,748,000	2,656	22,520,000
Privately owned	963	10,200,000	974	10,076,000
Government owned	1,566[1]	11,548,000	1,682[1]	12,444,000
United Kingdom	2,097	19,797,000	2,206	20,138,000
Norway	1,377	14,303,000	1,401	13,417,000
Liberia	1,151	15,717,000	967	12,770,000
Japan	1,272	9,444,000	1,267	8,676,000
Greece	867	6,882,000	828	6,781,000
USSR[2]	1,227	6,330,000	1,124	5,397,000
Italy	591	5,092,000	609	5,049,000
France	972	4,804,000	604	4,809,000
West Germany	840	4,789,000	863	4,787,000
Other countries	5,632	34,769,000	5,508	33,313,000

[1] Excluding 155 Navy-owned ships and special types in reserve fleets of the Maritime Administration in 1963, and 144 in 1964; including 413 merchant type ships adapted for military use in 1963 and 367 in 1964. [2] Source material limited and unreliable. Source: Maritime Administration, U.S. Department of Commerce.

U.S. Oceangoing Ships in Foreign Trade. Fifteen U.S. flag shipping companies have contracted with the government to service the 30 essential trade routes of the United States. On July 1, 1965, there were 312 ships subsidized in part by the U.S. government. Of these, 57 ships were idle during the marine engineers' strike from June 16 to Sept. 1, 1965. An additional 110 nonsubsidized ships—tramp ships, industrial carriers, and tankers—were engaged in foreign trade.

The seaborne foreign trade of the United States in 1964 amounted to 341.6 million long tons of commercial cargoes. U.S. flag ships carried 28.3 million long tons, or 8.3% of the total U.S. commercial sea trade.

NICHOLAS JOHNSON
Maritime Administrator

SHOOTING. See SPORTS.

SHOWS. For animal shows, see SPORTS. For musical and theatrical shows, see DANCE; MOTION PICTURES; MUSIC; THEATER; and for art shows, see ART.

SIERRA LEONEAN DANCER, from his country's national dance troupe, entertains at a special outdoor performance in Trafalgar Square, London, in September, as part of the Commonwealth Arts Festival.

PICTORIAL PARADE

SIERRA LEONE

Sierra Leone, now a constitutional monarchy with Queen Elizabeth II of Britain as sovereign, took a step in 1965 toward achieving the status of a republic. On May 17, its parliament passed a government-sponsored bill making royal assent unnecessary before a republican constitution can be introduced. A general election must take place before the change can take place.

Economy. In May, parliament approved an "Africanization" bill which restricts activities in certain trades to Sierra Leoneans. These activities are the manufacture and sale of cement blocks; the transport of people and goods for hire; the opening of new bakeries, pharmacies, and soft-drink plants; and the operation of gas stations not attached to garages.

A 13,200-kilowatt, $5 million diesel power plant at King Tom, near Freetown, was completed in June. In March the government signed an agreement with the Haifa Refining Company, an Israeli government corporation, to construct a $4.2 million oil refinery near Freetown.

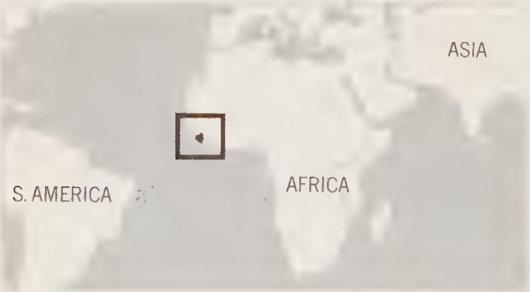
Sierra Leone took part in talks regarding the possibility of establishing a free-trade zone between Sierra Leone, Guinea, Ivory Coast, and Liberia. At a meeting held in Freetown, the capital, on May 29, the four countries agreed to set up an interim organization with a view to founding a permanent Organization for West African Economic Cooperation.

Foreign Affairs. From April 16 to 26 a Sierra Leone trade and aid mission visited Moscow and signed two agreements, one for cultural and scientific cooperation, and the other for increased trade. The mission also initialed a protocol providing for the sale of Soviet machinery to Sierra Leone, and also arranged for Soviet experts to visit Sierra Leone to study possible assistance projects. In July a Sierra Leone delegation signed a $2 million agreement with Nationalist China that provides for agricultural and technical assistance over a five-year period.

The U.S. assistant secretary of state for Africa, G. Mennen Williams, visited Sierra Leone from September 23 to 25.

PETER KOLAR
Office of Central African Affairs
U.S. Agency for International Development

SIERRA LEONE · Information Highlights



Area: 27,699 square miles.
Population: 2,200,000 (July 1, 1964, est.).
Chief Cities (1963 census): Freetown, the capital, 127,917; Bo, 26,613.
Government: *Sovereign*—Queen Elizabeth II of Britain; *governor general*—Sir Henry J. Lightfoot-Boston (took office May 5, 1962); *prime minister*—Albert Margai (took office Apr. 29, 1964). *Parliament*—House of Representatives, 74 members (62 elected, 12 selected by tribal authorities); party seating (1965): Sierra Leone People's party, 48; All Peoples Congress, 14.
Education: *Total school enrollment* (1961)—102,337 (primary, 91,895; secondary, 8,753; teacher-training, 588; technical, 753; higher, 348).
Finance (1963–64 est.): *Revenues*, $23,300,000; *expenditures*, $22,400,000; *net public debt* (1962–63), $15,000,000; *monetary unit*, Leone (0.7143 Leone equals U.S.$1).
Economic Index (1964): *Cost of living*, 119 (1958 = 100).
Crops (metric tons): Palm kernels (1963–64), 52,800 (ranks 4th among world producers); rice (1963–64), 331,000; cassava (1962–63), 54,000; cocoa beans (1964–65), 4,000.
Minerals (metric tons, 1964): Gem diamonds, 516,000 carats (ranks 4th among world producers); iron ore, 1,993,000; bauxite, 151,000; chromite (1963), 2,782; gold, 44 troy ounces (exported).
Foreign Trade (1964): *Exports*, $95,000,000 (chief exports, 1963: diamonds (uncut), $45,300,000; iron ore and concentrates, $13,800,000; palm kernels, $6,900,000; coffee, $1,800,000); *imports*, $97,000,000 (chief imports, 1963: gasoline and diesel and other fuel oils, $7,800,000; construction and mining machinery, $3,800,000; printed cotton fabrics, $2,900,000). *Chief trading partners* (1963): Britain (took 81% of exports, supplied 43% of imports); Netherlands (took 10% of exports, supplied 8% of imports); Japan (supplied 9% of imports).
Transportation: *Roads* (1964), 3,966 miles (252 paved); *motor vehicles* (1964), 14,800 (automobiles, 9,900); *railways* (1963), 311 miles; *airline*, Sierra Leone Airways; *principal airport*, Lungi.
Communications: *Telephones* (1964): 5,500; *television stations* (1964), 1; *television sets* (1964), 600; *radios* (1962), 9,200; *newspapers* (1962), 2 (daily circulation, 18,000).

SIHANOUK, Prince Norodom. See biographical sketch under CAMBODIA.

SILK

In 1964, world production and consumption of raw silk showed moderate increases over the preceding year. The increases were due principally to a more reasonable and more stable price level of raw silk. Furthermore, the demand for mixed fabrics, combining silk with wool, cotton, or a variety of man-made fibers, increased considerably.

U.S. Consumption. The consumption of raw silk in the United States in 1964 amounted to 36,547 standard bales (132,275 pounds), according to statistics compiled by the American Silk Council, Inc. This was an increase of 11.2% over the 32,572 bales consumed in 1963. Imports into the United States in 1964 amounted to 37,103 bales, for an increase of 7.5% over 1963.

Table 1—RAW SILK PRODUCTION BY MAJOR COUNTRIES, 1964

Country	Metric tons	Country	Metric tons
Brazil	89	Korea, South	787
Bulgaria	30	Lebanon	15
China	7,038	Poland	7
France	6	Rumania	10
Greece	18	Spain	45
Hungary	20	Syria	15
India	1,466	Turkey	72
Iran	145	USSR	2,618
Italy	561	Vietnam, South	145
Japan	19,458	Yugoslavia	60

World Production. In 1964, world silk production totaled 32,500 metric tons, an increase of 5.7% over the 30,750 metric tons produced in 1963.

Table 2—RAW SILK CONSUMPTION BY MAJOR COUNTRIES, 1964

Country	Metric tons	Country	Metric tons
France	699	Japan	17,030
Germany	213	Korea, South	232
Great Britain	195	Switzerland	295
India	1,569	United States	2,179
Italy	1,360		

World Consumption. Raw silk consumption in 1964 totaled 23,772 metric tons, as against 20,602 metric tons in 1963. Japan was the leading consumer, followed by the United States.

HANS VATERLAUS
Executive Vice President
International Silk Association (USA) Inc.

SILVER

World production of silver decreased from 250.8 million troy ounces in 1963 to 249.5 million ounces in 1964, as reported by the U.S. Bureau of Mines. The following seven major producers furnished 80.2% of the total: Mexico, 41.9 million ounces; Peru, 37.04; United States, 37.0; Canada, 30.3; Soviet Union (est.), 27.0; Australia, 18.3; and Japan, 8.6 million ounces.

U.S. MINE PRODUCTION OF SILVER
(In troy ounces)

State	1962	1963	1964
Alaska	22,199	14,010	7,336
Arizona	5,453,585	5,373,058	5,810,510
California	132,505	156,528	171,621
Colorado	2,087,813	2,307,305	2,626,431
Idaho	17,772,435	16,710,725	16,483,495
Kentucky	1,410	1,515	1,673
Michigan	401,491	338,997	349,195
Missouri	490,896	131,664	...
Montana	4,560,714	4,241,620	5,289,959
Nevada	245,164	214,976	172,447
New Mexico	301,549	256,475	242,405
New York	19,451	19,544	13,306
North Carolina	100,439	26,754	...
Oregon	6,047	58,234	14,372
Pennsylvania	...[1]	...[1]	...[1]
South Dakota	113,052	117,301	132,981
Tennessee	112,251	107,913	90,539
Utah	4,628,446	4,790,511	4,551,960
Washington	350,185	374,373	375,603
Wyoming	...	...	28
Total output	36,799,632	35,241,503	36,333,861
Total value	$39,929,000	$45,076,000	$46,980,000

[1] Included with Washington. (Source: U.S. Bureau of Mines.)

United States. Mine output of recoverable silver increased from 35,243,000 troy ounces in 1963 to 36,334,000 ounces in 1964. Minted silver production increased from 35,000,000 ounces in 1963 to 37,000,000 in 1964. This comprised 14.8% of the world output. In the first nine months of 1965, output from U.S. mines totaled 28,895,592 ounces, compared with 26,801,296 ounces in the comparable period of 1964. (See also MINING; MONEY.)

BERENICE B. MITCHELL
Supervisory Statistical Officer, Division of International Activities, U.S. Bureau of Mines.

SINGAPORE

Singapore, formerly a state in the Malaysia federation, abruptly acquired independent status on Aug. 9, 1965. On that date, Singapore's Prime Minister Lee Kuan Yew reluctantly yielded to the demands of Malaysia's Prime Minister Abdul Rahman and withdrew Singapore from the federation.

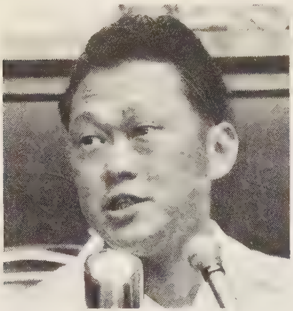
Relations between the Malay-dominated federal government and the state government in heavily Chinese Singapore had been stormy during the two years of federation. In the spring of 1964, Lee's People's Action Party (PAP) moved aggressively to expand its political base to the mainland, thereby accentuating Malayan fears of eventual Chinese political domination. Severe communal rioting between ethnic Chinese and Malays took place in Singapore during August and September 1964. Tensions increased in 1965, and, partly to prevent a recurrence of racial strife, Rahman decreed that Singapore withdraw.

The New Nation. The PAP government assumed independence in a strong internal position, with both opposition parties enfeebled. The pro-Communist Barisan Sosialis had lost an important July by-election in a radical constituency, and the Singapore branch of the United Malays National Organization was dependent on the parent organization in Malaya for tactical inspiration and funds.

After independence, Prime Minister Lee reshuffled his cabinet. The key posts of foreign minister and defense minister went to veteran cabinet officials Sinnathamby Rajaratnam and Dr. Goh Keng Swee.

The Lee government quickly received diplomatic recognition from most major nations. Singapore was admitted to the United Nations on September 21 and to the Commonwealth of Nations on October 16.

Foreign Policy. In contrast to the pro-Western stance of Malaysia, Singapore quickly adhered to a policy of nonalignment. However, the government decided to retain the British military bases, chiefly



PIX

LEE KUAN YEW, prime minister of Singapore, unexpectedly and reluctantly found himself the leader of an independent nation on Aug. 9, 1965, when Malaysia's Prime Minister Rahman decreed that Singapore must leave the Malaysia federation. Lee was stunned by the move, although it was his attempt to extend political power to mainland Malaya and the resulting racial tension that had provoked Rahman's decision. "My dream is shattered," he told reporters, but, rebounding, he set about to establish a national identity and nonaligned foreign policy for Singapore.

Lee was born to a wealthy Chinese family in Singapore on Sept. 16, 1923. Staunchly anticolonial, he graduated from Cambridge University and returned to enter Singapore politics. In 1954 he helped found the Socialist People's Action Party, and became its secretary general. When Singapore achieved self-government in 1959, Lee became prime minister. Despite opposition from the left wing of his party, he brought Singapore into Malaysia in 1963.

because the island state would be virtually defenseless without them, but also because their premature dismantling would hurt the economy. Prime Minister Lee indicated that Britain could use the bases to support Malaysia against Indonesia's policy of "confrontation," pending a renegotiation of the Anglo-Malaysian Defense Treaty. Although retention of the bases gave Indonesia an excuse for applying to Singapore the same "neocolonialist" charges it had lodged against Malaysia, Indonesia's internal difficulties ensuing from the abortive pro-Communist coup of October 1 averted a showdown.

The Singapore government attached special importance to becoming a member of the Afro-Asian bloc. Foreign Minister Rajaratnam headed a goodwill mission to Asian and African states in the fall.

Taking an anti-American position, Prime Minister Lee in late August revealed a 1960 bribe offer by the U.S. Central Intelligence Agency (CIA) to forestall the disclosure of CIA activities in Singapore. The prime minister warned that his government would prohibit American use of Singapore bases if the United States should inherit Britain's responsibility for defending Malaysia, and alternatively would consider offering the bases to the Soviet Union. He indicated willingness to establish diplomatic ties with Communist China, provided Peking respected Singapore's policy of nonalignment.

Relations with Malaysia remained troubled. Lee favored an aggressive trade policy without regard for political orientations of trading partners, but Malaysia's Prime Minister Rahman warned Singapore not to establish close relations with Indonesia. Malaysia and Singapore placed heavy import restrictions on each other's goods on August 9, but in October agreed in principle to lift them.

SINGAPORE · Information Highlights

Area: 224 square miles.
Population: 1,844,000 (Dec. 31, 1964, est.).
Chief City (1957 census): Singapore, the capital, 925,241.
Government: *Head of State*—Inche Yusof bin Ishak; *prime minister*—Lee Kuan Yew. *Parliament*—Legislative Assembly, 51 members; party seating (1965)—People's Action Party, 38; Barisan Sosialis, 13.
Education: *Literacy rate* (1957)—50% of population aged 15 and over. *Total school enrollment* (1961)—381,509 (primary, 302,070; secondary, 66,478; higher, 11,582).
Finance (1964 est.): *Revenues*, \$38,000,000; *expenditures*, \$30,000,000; *monetary unit*, Malayan dollar (3.07 dollars equal U.S.\$1).
Cost of Living Index (1964): 104 (1961 = 100).
Manufacturing (metric tons, 1963): Cement, 194,000; meat, 20,000; beer, 271,000 hectoliters.
Fish Catch (metric tons, 1963): 12,300.
Foreign Trade (1964): *Exports*, \$903,000,000 (chief exports, 1963, including reexports): crude rubber, \$319,000,000; petroleum products, \$123,000,000; *imports*, \$1,136,000,000 (chief imports, 1963: crude rubber, \$267,000,000; petroleum products, \$141,000,000; rice, \$56,000,000). *Chief trading partners* (1963): Malaysia (took 35% of exports, supplied 21% of imports); Indonesia (took 8% of exports, supplied 15% of imports); Britain (took 6% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 520 miles; *motor vehicles* (1964), 115,334 (automobiles, 93,427); *railways* (1964), 16 miles.
Communications: *Telephones* (1964): 73,879; *television sets* (1963), 31,000; *radios* (1961), 149,000; *newspapers* (1963), 9 (daily circulation, 497,000).

Prospects. Newly independent Singapore enjoyed certain advantages: governmental stability, enhanced by able leadership; an industrious population with marked commercial acumen; and a prosperous, if vulnerable, economy. Its external position was less promising. Malaysia, still suspicious of PAP ambitions, could cut off Singapore's water supply in a period of tension. Nearby Indonesia apparently retained its expansionist tendencies. Finally, there remained the continuing threat of Peking's attempt to establish regional hegemony. (See also ASIA; MALAYSIA.)

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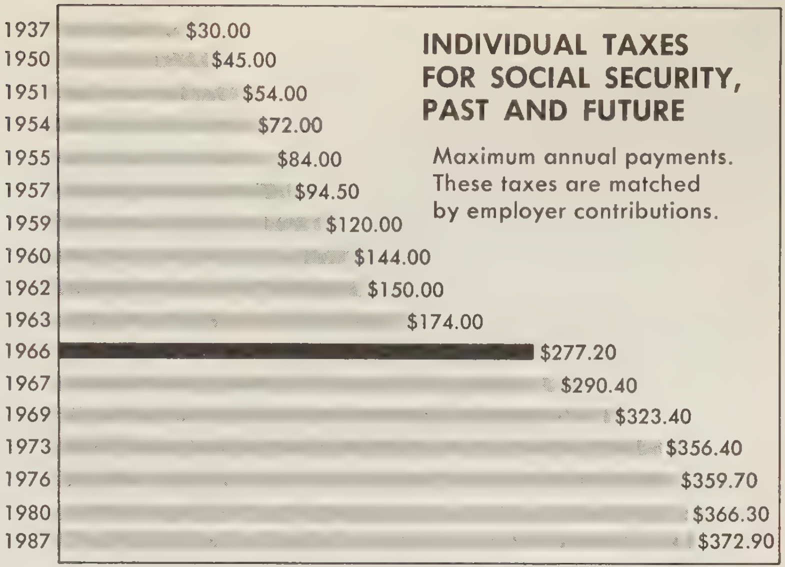
SKATING. See SPORTS.
SKIING. See SPORTS.
SMOKING. See MEDICINE; PUBLIC HEALTH.
SOCCER. See SPORTS.

SOCIAL SECURITY

The 30th anniversary of the passage of the Social Security Act was reached in 1965. The act and its amendments authorize insurance plans that help American workers meet the economic risks of old age, unemployment, disability, and death. The 30th anniversary year was marked by additions to the program that were expected to affect every American family. After years of controversy, Congress in 1965 extended the social security program to provide health insurance for men and women aged 65 and over.

New Legislation. Medicare—health insurance for the aged—was included in the Social Security Amendments of 1965, signed by President Johnson on July 30. The new amendments made the following 10 changes in the social security system:

(1) The hospital insurance part of the program provides for payment of specified costs of hospital and posthospital care of persons 65 and over. Benefits are to begin July 1, 1966, except that payments for care in a nursing home or other extended care facility will begin January 1967. To finance these benefits, beginning in 1966, workers, their employers, and self-employed persons will pay 0.35% each on earnings up to \$6,600 (the maximum taxable amount under the 1965 amendments). The tax will increase gradually until it is 0.8% in 1987 and thereafter.



SOCIAL SECURITY TAXES, in terms of dollars paid by individuals, increased about 900 percent between 1937 and 1966. This chart shows the rise in contributions since the start of the system, with projections into the future.

"PFIZER SCENE," EMPLOYEE PUBLICATION OF CHAS. PFIZER & CO. INC.

(2) Those aged 65 and over can enroll in the voluntary medical insurance part of the program, which provides for payment of part of the charges for physicians' and surgeons' services, home health services, and certain other medical and health services. Persons enrolling pay a $3 monthly premium; the federal government also contributes $3 a month for each person enrolled. (See also MEDICARE.)

(3) The cash benefits under old-age, survivors, and disability insurance were increased by 7%.

(4) Social security coverage was extended to self-employed physicians.

(5) Tips were included as wages.

(6) The retirement test, the definition of disability, and the insured-status requirement of persons aged 72 or over were liberalized.

(7) Payment of cash benefits to eligible children aged 18–21 who are in school was authorized.

(8) Widows were allowed the option of starting cash benefits at age 60 on a reduced basis.

(9) The amount of earnings taxable and creditable for benefit purposes was increased to $6,600.

(10) The contribution rate scheduled for the cash benefits under the program was increased.

In 1965, Congress also amended the Railroad Retirement Act. The maximum earnings and tax base were raised to $6,600, the tax rate was lowered, a provision relating to spouse's benefits was liberalized, tips were covered, and relationships with the hospital insurance provisions of the Social Security Act were established.

The 1965 amendments to the Social Security Act also made improvements in the welfare provisions of the act.

Administration of the Program. The Social Security Administration, headed by the commissioner of social security, administers the federal social insurance program under the Social Security Act—old-age, survivors, disability, and health insurance. It also administers operations under the Federal Credit Union Act. The administration, which is a constituent unit of the U.S. Department of Health, Education, and Welfare, is charged with studying and making recommendations for advancing economic security through social insurance.

Since January 1963, the Welfare Administration, which is another unit of the Department of Health, Education, and Welfare, has been responsible for the Social Security Act programs for the needy and for child health and welfare services.

Unemployment insurance is provided under a federal-state system. The states operate their own programs according to standards set by federal law. Federal funds pay the administrative costs of the state operations.

Benefits and Contributions. In the 12 months ended June, 1965, the social security system paid out more than $16,618,200,000 in monthly cash benefits and lump-sum payments. In July 1965, monthly benefits were paid to 20,243,272 persons, about two thirds of them aged 65 and over. The average monthly check for a retired worker was $78.06 (excluding payments for his dependents). For a disabled worker, the average monthly payment from social security funds was $91.16.

During 1965, employers and employees paid contributions at a rate of 3.625%, and self-employed workers paid at a rate of 5.4%, on earnings up to $4,800. For 1966, the total employer and employee rate (including the contribution for hospital insurance) is 4.2%, and the rate for self-employed is 6.15%, on earnings up to $6,600.

Federal Credit Unions. The Social Security Administration is responsible for the chartering and supervision of credit unions organized under the Federal Credit Union Act. These unions are cooperative organizations designed to promote thrift among their members and create a source of loans for provident and productive purposes. Membership is limited to groups having a common bond of association, occupation, or residence.

The credit unions are subject to periodic examinations by the Social Security Administration's Bureau of Federal Credit Unions, which prescribes standard bylaws and provides operating manuals.

At the end of June 1965, there were about 11,400 credit unions in operation. Their total membership was nearly 8,200,000, and their total assets amounted to $4,770,000,000.

ROBERT M. BALL
Commissioner, Social Security Administration

SOCIAL WELFARE. See CHILD WELFARE; OLD AGE; SOCIAL SECURITY.

SOCIALISM

The democratic Socialist movement continued in 1965 to exert its greatest political influence in western Europe. The movement advocated strengthening the European Common Market and increasing political and economic integration among European countries.

Socialist International. The Bureau of the Socialist International, with more than 40 Socialist and labor party affiliates, urged ending hostilities in Vietnam and the immediate opening of peace negotiations. The bureau also welcomed the cooperation of numerous democratic progressive parties in Africa, Asia, and Latin America in the work of the Socialist International. It planned a high-level conference for 1966 on the economic and political problems of the world's new nations, and urged that these nations receive increased economic and social aid from the more-developed nations.

Britain. The Labour party of Britain, a member of the Socialist International, remained in control of Parliament with a slim majority. Under Prime Minister Harold Wilson, the government, through its new Department of Economic Affairs, initiated economic programs for increasing British production 25% by 1970, for combating inflation, and for evolving a rational income policy. The Labour party secured parliamentary approval to submit to the House of Commons a plan for the renationalization of the steel industry. In November the Labour government instituted an economic boycott against Rhodesia after the white-controlled Rhodesian government declared its independence from Britain.

Continental Europe. Socialist and labor parties continued to wield power in the governments of Austria, Italy, Switzerland, Denmark, and Sweden.

Socialists in Norway and Belgium suffered setbacks in elections in 1965. The Labor party in Norway suffered its first election defeat in 30 years when it returned only 68 of its members to parliament. The Belgian Socialist party lost 20 of its 80 parliamentary seats in the 1965 elections, and formed a coalition government with the Social Christian party.

The Socialist party of France supported François Mitterrand in the presidential election after Gaston Defferre, Socialist mayor of Marseille, withdrew from the contest.

In West Germany, the Social Democrats were unsuccessful in their efforts to elect Mayor Willy Brandt of West Berlin as chancellor. The party, however, increased its vote to 39.3% of the total, and won 202 parliamentary seats.

Austrian Socialists elected Franz Jonas, mayor of Vienna, as the new president of the country after the death of Socialist President Adolf Schärf. The Socialists again formed a coalition government with the Catholic People's party.

United States. The Socialist party of the United States, the American affiliate of the Socialist International, nominated few party members for public office in 1965. The party favored many of the federal government's proposals in the areas of racial integration, civil rights, and the social services, and urged the peaceful settlement of international disputes.

Canada. The New Democratic party, led by T.C. Douglas, emerged from the November 1965 elections holding the balance of power in the Canadian Parliament. The party increased its seats in the House of Commons by 4, for a total of 21.

Asia and Africa. Socialists made gains during 1965 in elections in several countries. In Israel the moderate Socialist coalition party, Mapai-Achdut Ha' Avoda, led by Premier Levi Eshkol, won 45 seats in the Israeli Knesset, as against the 10 seats won by the Rafi party of former Premier David Ben-Gurion. In the Malagasy Republic, President Philibert Tsiranana was overwhelmingly returned to office when his Social Democratic party received 97% of the votes.

The Socialist party of Japan elected 73 members (a gain of 8 seats) in the House of Councillors, and the Democratic Socialists elected 7 members (a loss of one seat).

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League for Industrial Democracy;
Author of "A History of Socialist Thought"

SOCIETIES AND ORGANIZATIONS

This article presents a selected list of some of the principal societies, associations, foundations, and trusts of the United States and Canada. The information in each case is supplied by the organization concerned, and includes membership figures, date of annual meeting, officers, and headquarters location or address.

Adult Education Association of the U.S.A.—Membership: 3,800. Annual meeting: New York City, Nov. 18–23, 1965. President, Wilson B. Thiede; secretary, Hamilton Stillwell. Headquarters: 1225 19th St. NW, Washington, D.C.

Alcoholics Anonymous (The General Service Board of A.A., Inc.)—Membership: approximately 350,000 in more than 12,000 affiliated groups. Annual conference: New York City, April 18–24, 1966. Chairman, John L. Norris, M.D. Headquarters: 305 East 45th St., New York, N.Y., 10017.

American Academy of Arts and Letters.—Membership: 50. Annual meeting: New York City, December 1965. President, Lewis Mumford; secretary, John Hersey. Headquarters: 633 West 155th St., New York, N.Y., 10032.

American Academy of Arts and Sciences.—Membership: 2,050. Annual meeting: Boston, Mass., May 11, 1966. President, Paul A. Freund; secretary, Sanborn C. Brown. Headquarters: 280 Newton St., Brookline Station, Boston, Mass., 02146.

American Academy of Political and Social Science.—Membership: 19,600, including 5,000 libraries. Annual meeting: Philadelphia, Pa., April 15–16, 1966. President, James C. Charlesworth; business mgr., Ingeborg Hessler. Headquarters: 3937 Chestnut St., Philadelphia, Pa., 19104.

American Association for Health, Physical Education, and Recreation.—Membership: 45,000. National meeting: Chicago, Ill., March 18–22, 1966. President, Reuben B. Frost; exec. secy., Carl A. Troester, Jr. Headquarters: 1201 Sixteenth St. NW, Washington, D.C., 20036.

American Association for the Advancement of Science.—Membership: 95,200 and 302 affiliated groups. Annual meeting: Washington, D.C., Dec. 26–30, 1966. President, Alfred S. Romer; secretary, Dael Wolfe. Headquarters: 1515 Massachusetts Ave. NW, Washington, D.C.

American Association of University Professors.—Membership: 78,000. Annual meeting: Atlanta, Ga., April 29–30, 1966. President, Clark Byse; gen. secy., William P. Fidler. Headquarters: 1785 Massachusetts Ave., NW, Washington, D.C.

American Association of University Women.—Membership: over 167,000. National convention: Miami Beach, Fla., June 19–23, 1967. President, Blanche H. Dow; gen. dir., Pauline Tompkins. Headquarters: 2401 Virginia Ave. NW, Washington, D.C., 20037.

American Automobile Association.—Membership: over 9,000,000 in 782 affiliated groups. Annual meeting: San Francisco, Calif., Oct. 5–6, 1965. President, Paul R. Gingher; secretary, William B. Spencer. Headquarters: 1712 G St. NW, Washington, D.C.

American Bankers Association.—Membership: 18,295 commercial banks and branches. Annual meeting: San Francisco, Calif., Oct. 23–26, 1966. Board chairman, Archie K. Davis; secretary, Henry M. Sommers. Headquarters: 90 Park Av., New York, N.Y., 10016.

American Bar Association.—Membership: 120,000. Annual meeting: Montreal, Canada, Aug. 8–12, 1966. President, Edward W. Kuhn; secretary, Gibson Gayle, Jr. Headquarters: 1155 E. 60th St., Chicago, Ill.

American Bible Society.—Membership: 424,000. Annual meeting: New York City, May 12, 1966. President, Everett Smith; general officers, Robert T. Taylor, Laton E. Holmgren; treasurer, Charles W. Baas. Headquarters: Broadway at 61st St., New York, N.Y.

American Book Publishers Council.—Membership: 188. Annual meeting: New York City, May 10, 1965. President, Raymond C. Harwood; managing director, Dan Lacy. Headquarters: One Park Ave., New York, N.Y., 10016.

American Cancer Society, Inc.—Membership: 176 voting members; 58 chartered divisions. Annual meeting: New York City, Oct. 18–20, 1966. President, Leonard W. Larson, M.D.; secretary, Charles R. Ebersol. Headquarters: 219 East 42nd St., New York, N.Y., 10017.

American Chemical Society.—Membership: 100,000. National meetings, 1966: Phoenix, Ariz., Jan. 16–21; Pittsburgh, Pa., March 22–31; New York City, Sept. 11–16. President, William J.. Sparks; executive secretary, B.R. Stanerson. Headquarters: 1155 16th St. NW, Washington, D.C., 20036.

American Civil Liberties Union.—Membership: 80,000. Biennial conference: Stony Brook, New York, June 19–22, 1966. Exec. dir., John de J. Pemberton, Jr.; board chairman, Ernest Angell. Headquarters: 156 Fifth Avenue, New York, N.Y., 10011.

American Council on Education.—Membership: 1,113 colleges and universities, and 230 educational organizations. Annual meeting: New Orleans, La., Oct. 12–14, 1966. President, Logan Wilson; executive secy., Charles G. Dobbins. Headquarters: 1785 Massachusetts Ave. NW, Washington, D.C.

American Dental Association.—Membership: 103,929. Annual meeting: Dallas, Texas, Nov. 14–17, 1966. President, Maynard K. Hine, D.D.S.; secretary, Harold Hillenbrand, D.D.S. Headquarters: 211 East Chicago Ave., Chicago, Ill., 60611.

American Economic Association.—Membership: 13,025 and 4,791 subscribers. Annual meeting: New York City, Dec. 28–30, 1965. President, Joseph J. Spengler; secretary, Harold F. Williamson. Headquarters: 629 Noyes St., Evanston, Ill., 60201.

American Farm Bureau Federation.—Membership: 1,647,455 families. Annual meeting: Chicago, Ill., Dec. 13–16, 1965. President, Charles B. Shuman; secretary, Roger Fleming. Headquarters: Merchandise Mart Plaza, Chicago, Ill.

American Geographical Society.—Membership: 4,200. Annual dinner: New York City, Dec. 2, 1965. President, Walter A. Wood; director, Charles B. Hitchcock. Headquarters: Broadway at 156 St., New York, N.Y., 10032.

American Geophysical Union.—Membership: 8,059 and 81 organizations. Annual meeting: Washington, D.C., April 19–22, 1966. President, George P. Woollard; gen. secy., A. Nelson Sayre. Headquarters: 1145 Nineteenth St. NW, Washington, D.C., 20036.

American Heart Association.—Membership: 64,000 in 55 affiliates and 1,400 local organizations. Annual meeting: New York City, October 1966. President, Dr. Helen B. Taussig; secretary, Ross Reid. Headquarters: 44 East 23rd St., New York, N.Y., 10010.

American Historical Association.—Membership: 13,000. Annual meeting: San Francisco, Calif., Dec. 28–30, 1965. President, Frederic C. Lane; exec. secy., Paul L. Ward. Headquarters: 400 A St. SE, Washington, D.C.

American Hospital Association.—Membership: 7,520 personal; 8,639 institutional. Annual meeting: Chicago, Ill., Aug. 29–Sept. 1, 1966. President, Philip D. Bonnet, M.D.; executive vice president, Edwin L. Crosby, M.D.; secretary, James E. Hague. Headquarters: 840 N. Lake Shore Drive, Chicago, Ill.

American Institute of Aeronautics and Astronautics.—Membership: 36,000. Annual meeting: Boston, Mass., Nov. 28–Dec. 2, 1965. President, Richard Horner; executive secy., James J. Harford. Headquarters: 1290 Avenue of the Americas, New York, N.Y.

American Institute of Architects.—Membership: 17,600. National convention: Denver, Colo., June 27–July 1, 1966. President, Morris Ketchum, Jr.; secretary, Oswald H. Thorson. Headquarters: 1735 New York Ave. NW, Washington, D.C., 20006.

American Institute of Chemical Engineers.—Membership: 26,677. Annual meeting: Philadelphia, Pa., Dec. 5–9, 1965. President, Dr. S.W. Churchill; secretary, F.J. Van Antwerpen. Headquarters: 345 East 47th St., New York, N.Y. 10017.

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.—Membership: 38,885. Annual meeting: New York City, Feb. 27–March 3, 1966. President, William B. Stephenson; executive director and secretary, R. William Taylor. Headquarters: 345 East 47th St., New York, N.Y.

American Legion, The.—Membership: 2,600,000. National convention, Portland, Ore., Aug. 20–26, 1965. National commander, L. Eldon James; national adjutant, E.A. Blackmore. Headquarters: 700 Pennsylvania St., Indianapolis, Ind., 46206.

American Library Association.—See separate article.

American Mathematical Society.—Membership: 11,280. Annual meeting: Chicago, Ill., Jan. 24–28, 1966. President, A.A. Albert; secretary, J.W. Green. Headquarters; P.O. Box 6248, Providence, R.I., 02904.

American Medical Association.—Membership: 206,544. Annual meeting: New York City, June 20–24, 1965. President, James Z. Appel, M.D.; secretary-treasurer, Raymond M. McKeown, M.D. Headquarters: 535 N. Dearborn St., Chicago, Ill., 60610.

American National Red Cross.—Adult membership: 28,200,000 in 3,400 chapters. National convention: San Diego, Calif., May 8–11, 1966. Chairman, E. Roland Harriman; president, James F. Collins. Headquarters: 17th and D Sts. NW, Washington, D.C., 20006.

American Newspaper Publishers Association.—Membership: 950. National convention: New York City, April 25–28, 1966. President, Gene Robb; secretary, St. Clair Balfour. Headquarters: 750 Third Ave., New York, N.Y. 10017.

American Nurses Association.—Membership: 170,000 in 54 state and territorial associations. National convention: San Francisco, Calif., June 13–17, 1966. President, Jo Eleanor Elliott; exec. dir., Judith G. Whitaker. Headquarters: 10 Columbus Circle, New York 19, N.Y.

American Philosophical Association.—Membership: 2,267. Annual meeting: Eastern Division—New York City, Dec. 27–29, 1965; Western Division—Minneapolis, Minn., May 5–7, 1966; Pacific Division—San Francisco State College, Calif., Dec. 27–29, 1965. President, Charles A. Baylis; secretary, Lewis A. Hahn. Headquarters: Southern Illinois University, Carbondale, Ill., 62903.

American Physical Society.—Membership: 22,000 American and foreign members. Annual meeting: New York City, Jan. 26–29, 1966. President, Dr. John A. Wheeler; secretary, Karl K. Darrow. Headquarters: Pupin Physics Laboratories, Columbia University, N.Y.

American Political Science Association.—Membership: 12,000. Annual meeting: Washington, D.C., Sept. 7–11, 1965. President, Gabriel A. Almond; exec. dir., Evron M. Kirkpatrick. Headquarters: 1726 Massachusetts Ave. NW, Washington, D.C.

American Psychiatric Association.—Membership: 14,341 district branches in U.S. Annual meeting: Atlantic City, N.J., May 9–13, 1966. President, Harvey J. Tompkins, M.D.; secretary, Robert S. Garber, M.D. Headquarters: 1700 18th St. NW, Washington, D.C.

American Psychological Association.—Membership: 23,000. Annual meeting: New York City, Sept. 2–6, 1966. President, Nicholas Hobbs; exec. officer, Arthur H. Brayfield. Headquarters: 1200 17th St. NW, Washington, D.C.

American Society for Microbiology.—Membership: 9,000 and 34 local branches. Annual meeting: Atlantic City, N.J., April 25–29, 1965. President, R.D. Housewright; secretary, Philipp Gerhardt. Headquarters: 115 Huron View Blvd., Ann Arbor, Mich.

American Society of Civil Engineers.—Membership: 55,000. Annual meeting: Philadelphia, Pa., Oct. 17–21, 1966. President, William J. Hedley; secretary, William H. Wisely. Headquarters: 345 East 47th St., New York, N.Y., 10017.

American Society of Composers, Authors, and Publishers.—Membership: 7,970 composers and authors; 2,624 publishers. Annual meeting: New York City, March 1966. President, Stanley Adams; secretary, Paul Creston. Headquarters: 575 Madison Ave., New York, N.Y.

American Society of Mechanical Engineers, The.—Membership: 59,710. Annual meeting: Chicago, Ill., Nov. 7–11, 1965. President, Henry N. Muller; executive director, O.B. Schier, II Headquarters: 345 East 47th St., New York, N.Y., 10017.

American Sociological Association.—Membership: 9,250. Annual meeting: Miami Beach, Fla., Aug. 29–Sept. 1, 1966. President, Wilbert E. Moore; secretary, Robin M. Williams, Jr. Headquarters: 1001 Connecticut Ave. NW, Washington, D.C. See also article SOCIOLOGY.

American Youth Hostels, Inc.—Membership: 30,000 in 22 AYH Councils. Annual meeting: Chicago, Nov. 13–14, 1965. President, Stephens Dietz; secretary, Betty Bierer. Headquarters: 14 West 8th St., New York, N.Y., 10011.

Arthritis Foundation, The.—Membership: 78 chapters. Annual meeting: New York City, Oct. 4, 1965. President, William S. Clark, M.D.; secretary, Hayden N. Smith. Headquarters: 1212 Avenue of the Americas, New York, N.Y., 10036.

Association of Better Business Bureaus International.—Membership: 130 bureaus in U.S., Canada, Israel, Mexico, Puerto Rico, and Venezuela. Annual meeting: San Francisco, May 23–26, 1966. President, Victor H. Nyborg. Headquarters: Chrysler Building, New York, N.Y., 10017.

Association of the Junior Leagues of America, Inc.—Membership: 92,000 in 209 member leagues. Annual conference: Bal Harbour, Fla., May 8–12, 1966. President, Mrs. Warner Marsden; secretary, Mrs. John F. Tyler. Headquarters: Waldorf-Astoria Hotel, New York, N.Y., 10022.

Benevolent and Protective Order of Elks.—Membership: 1,361,455 in 2,049 lodges. National convention: Miami Beach, Fla., July 11–15, 1965. Grand exalted ruler, R. Leonard Bush; grand secretary, Franklin J. Fitzpatrick. Headquarters: 2750 Lake View Ave., Chicago, Ill., 60614.

B'nai B'rith.—Membership: 500,000 in 4,900 local groups. President, William A. Wexler; exec. vice-president, Rabbi Jay Kaufman. Headquarters: 1640 Rhode Island Ave. NW, Washington, D.C.

Boy Scouts of America.—Membership: 5,585,700 in 524 scout councils. Annual meeting: Bal Harbour, Fla., May 20–21, 1965. President, Thomas J. Watson, Jr.; chief scout exec., Joseph A. Brunton, Jr. Headquarters: New Brunswick, N.J.

Boys' Clubs of America.—Membership: 675,000 in 671 clubs. National convention: New York City, May 1–5, 1966. President, Albert L. Cole; national dir., John M. Gleason. Headquarters: 771 First Ave., New York, N.Y. 10017.

Camp Fire Girls, Inc.—Membership: 600,000 in 370 local councils. Annual meeting: Chicago, Ill., Nov. 7–9, 1965. President, Birdean Smith; secretary, Mrs. Anthony J. Celebrezze. National headquarters: 65 Worth Street, New York, N.Y. 10013.

Canadian Library Association (Association Canadienne des Bibliothèques).—Membership: 2,079 persons and 669 organizations. Annual conference: Calgary, Alberta, June 19–24, 1966. President, William Rentoual Castell; exec. dir., Elizabeth H. Morton. Headquarters: 63 Sparks St., Ottawa, Ontario.

Canadian Medical Association.—Membership 17,295. Annual meeting: Edmonton, Alberta, June 13–17, 1966. President, Dr. R.O. Jones; gen. secy., A.D. Kelly, M.D., D.Sc., L.L.D. Headquarters: 150 St. George St., Toronto 5, Ontario.

Daughters of the American Revolution (National Society).—Membership: 2,881 chapters. Continental congress: Washington, D.C., Apr. 18–22, 1966; April 17–21, 1967. President general, Mrs. William Henry Sullivan, Jr. Headquarters: 1776 D St. NW, Washington, D.C., 20006.

4-H Clubs.—Membership: 2,221,119 in 95,977 local clubs. National conference: Washington, D.C., April 17–22, 1966. Director, Mylo S. Downey. Address: Federal Extension Service, U.S. Dept. of Agriculture, Washington, D.C.

Freemasonry, Ancient Accepted Scottish Rite of (Northern Masonic Jurisdiction): Supreme Council, 33°.—Membership: 499,742 in 384 affiliated groups. Annual meeting: Cleveland, Ohio, Sept. 28–30, 1965. Sovereign grand commander, George E. Bushnell; grand secy. gen., Herbert N. Faulkner; exec. secy., Stanley F. Maxwell. Headquarters: 1117 Statler Bldg., Boston, Mass.

Freemasonry, Ancient and Accepted Scottish Rite of (Southern Jurisdiction): Supreme Council, 33°.—Membership: 535,000 in 206 affiliated groups. National convention: Washington, D.C., Oct. 16–20, 1967. Sovereign grand commander, Luther A. Smith; secy. gen., Claud F. Young. Headquarters: 1733 16th St. NW, Washington, D.C., 20009.

Future Farmers of America.—Membership: 454,516 in 50 state associations. National convention: Kansas City, Mo., Oct. 13–16, 1965. National adviser, A.W. Tenney; exec. secy., William Paul Gray. Headquarters: U.S. Office of Education, Washington, D.C., 20202.

General Federation of Women's Clubs.—Membership: 11,000,000 in 16,000 affiliated groups. National convention: New Orleans, La., June 6–11, 1965. President, Mrs. William H. Hasebroock, exec. secy., Mrs. Stephen J. Nicolas. Headquarters: 1734 N St. NW, Washington, D.C.

Geological Society of America.—Membership: 6,638. Annual meeting: San Francisco, Calif., Nov. 14–16, 1966. President, Robert F. Legget; secretary, Agnes Creagh. Headquarters: 231 East 46th St., New York, N.Y., 10017.

Girl Scouts of U.S.A.—Membership: 3,647,000. National convention: Detroit, Mich., October 1966. National president, Mrs. Holton R. Price, Jr.; exec. dir., Louise A. Wood. Headquarters: 830 Third Ave., New York, N.Y., 10022.

Holy Name, Confraternity of the.—Membership: 5,000,000 in 19,000 affiliated groups. National dir., Dennis B. McCarthy. Headquarters: 141 E. 65th St., New York, N.Y., 10021.

Institute of Electrical and Electronics Engineers, Inc.—Membership: 160,000. International convention: New York City, March 22–26, 1966. President, Dr. Bernard M. Oliver; secretary, Haraden Pratt. Address: 345 East 47th St., New York, N.Y.

International Council of Scientific Unions (Conseil International des Unions Scientifiques).—Membership: 57 national societies. General assembly: India, 1966. President, H.W. Thompson; secy.-gen., D. Blaskovic. Headquarters: 2 Via Sebenico, Rome, Italy.

International Society of Christian Endeavor.—Membership: 1,000,000. Biennial convention: Detroit, Mich., July 3–7, 1967. President, Arch J. McQuilkin; secretary, Harold E. Westerhoff. Headquarters: 1221 E. Broad St., Columbus, Ohio, 43216.

Kiwanis International.—Membership: 275,000 in 5,400 clubs in U.S., Canada, Mexico, Japan, Philippines, Caribbean, and western Europe. Annual convention: New York City, July 4–8, 1965. President, Edward C. Keefe; secretary, O.E. Peterson. Headquarters: 101 E. Erie St., Chicago, Ill.

Knights of Columbus.—Membership: 1,173,116. Annual meeting: Miami Beach, Fla., Aug. 16–18, 1966. Supreme knight, John W. McDevitt; supreme secy., D. Francis Sullivan. Headquarters: 71 Meadow St., New Haven, Conn.

Knights of Pythias.—Membership: 200,000 in 2,000 affiliated groups. Biennial meeting: Indianapolis, Ind., Aug. 8–12, 1966. Supreme chancellor, James C. Bayley; supreme secy., Joseph B. Hacker. Headquarters: 1202 Third St. SE, Cedar Rapids, Iowa.

League of Women Voters of the United States.—Membership: 145,500. National convention: Denver, Colo., May 2–6, 1966. President, Mrs. Robert J. Stuart; first vice-pres., Mrs. William H. Wood. Headquarters: 1200 Seventeenth St. NW, Washington, D.C.

Lions International.—Membership: 755,357 in 19,491 clubs in 132 countries. International convention: Los Angeles, Calif., July 7–10, 1965. President, Dr. Walter H. Campbell; vice-pres., Edward M. Lindsey. Headquarters: 209 N. Michigan Ave., Chicago, Ill., 60601.

Loyal Order of Moose.—Membership: 1,039,081 in 3,756 units. National convention: Chicago, Ill., June 12–16, 1966. Dir. gen., Paul P. Schmitz; supreme secy., Carl A. Weis. Headquarters: Mooseheart, Ill.

Modern Language Association of America.—Membership: 19,405. Annual meeting: Chicago, Dec. 27–29, 1965. President, Howard Mumford Jones; secretary, John Hurt Fischer. Headquarters: 4 Washington Place, New York, N.Y.

National Academy of Sciences.—Membership: 697. Annual meeting: Washington, D.C., April 25–27, 1966. President, Frederick Seitz; exec. officer, John S. Coleman. Headquarters: 2101 Constitution Ave. NW, Washington, D.C., 20418.

National Association for Mental Health, Inc.—Membership: 800 state and local organizations. Annual meeting: New York City, Nov. 17–20, 1965. President, Mrs. Winthrop Rockefeller; exec. dir., Philip E. Ryan. Headquarters: 10 Columbus Circle, New York, N.Y., 10019.

National Association for the Advancement of Colored People.—Membership: 500,000 in 1,800 units. National convention: Denver, Colo., June 28–July 3, 1965. President, Kivie Kaplan; exec. dir., Roy Wilkins. Headquarters: 20 W. 40th St., New York 18, N.Y.

National Association of Manufacturers.—Membership: 15,000. Annual meeting: New York City, Dec. 7–9, 1966. President, W.P. Gullander; secretary, John McGraw. Headquarters: 277 Park Ave., New York, N.Y.

National Audubon Society.—Membership: 44,000. Annual meeting: Sacramento, Calif., November 1966. President, Carl W. Buchhiester; secretary, Dr. Olin S. Pettingill, Jr. Headquarters: 1130 Fifth Ave., New York, N.Y.

National Conference of Christians and Jews, Inc.—Membership: 85,000 contributors. Annual meeting: New York City, Nov. 14–15, 1965. President, Dr. Sterling W. Brown; secretary, Oscar M. Lazrus. Headquarters: 43 West 57th St., New York, N.Y., 10019.

National Congress of Parents and Teachers.—Membership: 11,791,431 in 46,217 PTA's. National convention, Albuquerque, N.Mex., May 16–19, 1965. President, Mrs. Jennelle Moorhead; secretary, Mrs. Leon S. Price. Headquarters: 700 North Rush St., Chicago, Ill., 60611.

National Council of the Churches of Christ in the U.S.A.—Membership: 30 Protestant, Anglican, and Orthodox denominations. Triennial general assembly: Miami, Fla., Dec. 4–10, 1966. President, Bishop Reuben H. Mueller; gen. secy., R.H. Edwin Espy. Headquarters: 475 Riverside Dr., New York, N.Y., 10027.

National Council of the Young Men's Christian Associations.—Membership: 4,237,777 in 1,839 organizations. Annual meeting: Pittsburgh, Pa., May 7–9, 1965. President, W. Walter Williams; secretary, James F. Bunting. Headquarters: 291 Broadway, New York, N.Y.

National Education Association of the U.S.—Membership: 943,581, with affiliated statewide units in every state and

8,275 local affiliates. Annual meeting: Miami Beach, Fla., June 26–July 1, 1966. President, Richard D. Batchelder; exec. secy., William G. Carr. Headquarters: 1201 Sixteenth St. NW, Washington, D.C., 20036.

National Federation of Business and Professional Women's Clubs, Inc.—Membership: 175,000 in 3,650 clubs. National convention: Washington, D.C., July 25–29, 1965. President, Helen Krauss Leslie; acting exec. dir., Ellen C. Hermans. Headquarters: 2012 Massachusetts Ave. NW, Washington, D.C.

National Federation of Music Clubs.—Membership: 600,000 in 4,300 clubs and 13 national affiliates. Annual meeting: Minneapolis, Minn., August 1966; biennial convention, New York City, April 1967. President, Mrs. Clifton J. Muir; admin. dir., Lois Winterberg. Headquarters: 600 S. Michigan Ave., Chicago, Ill., 60605.

National Foundation—March of Dimes, The.—Membership: 3,100 chapters. President, Basil O'Connor; senor vice-pres., Joseph F. Nee. Headquarters: 800 Second Ave., New York, N.Y., 10017.

National Geographic Society. See the separate article GEOGRAPHY.

National Industrial Conference Board, Inc.—Membership: 3,900 subscribing associates. Annual meeting: New York City, Sept. 19–21, 1966. President, H. Bruce Palmer; secretary, Herbert S. Briggs. Headquarters: 845 Third Ave., New York, N.Y., 10022.

National Recreation and Park Association (formerly National Recreation Association).—Membership includes citizens interested in recreation, parks, and conservation, professional recreation leaders, and park executives. Annual congress: Washington, D.C., Oct. 10–15, 1966. President, Laurance S. Rockefeller; secretary, Joseph Prendergast. Headquarters: 8 West 8th St., New York, N.Y.

National Research Council of Canada.—Membership: council, 21; laboratory staff, 2,629. Annual meeting: Ottawa, Ontario, March 1966. President, Dr. B.G. Ballard; secretary, Dr. J.B. Marshall. Headquarters: Montreal Road, Ottawa, Ontario.

National Safety Council.—Membership 9,000. National Safety Congress and Exposition: Chicago, Ill., 25–28, 1965. President, Howard Pyle; secretary, R.L. Forney. Headquarters: 425 N. Michigan Ave., Chicago, Ill.

National Society for Crippled Children and Adults, Inc.—Membership: 52 state and territorial societies. National convention: Chicago, Ill., Nov. 19–22, 1965. President, J.P.W. Brown; exec. dir., Sumner G. Whittier. Headquarters: 2023 W. Ogden Ave., Chicago, Ill.

National Travelers Aid Association.—Membership: 87 local societies. President, Paul L. Mullaney; gen. dir., Savilla Mills Simons. Headquarters: 44 East 23rd St., New York, N.Y., 10010.

National Tuberculosis Association.—Membership: 2,000 affiliated groups. Annual meeting: San Francisco, Calif., May 22–25, 1966. President, Albert W. Dent, LL.D.; secretary, James C. Stone. Headquarters: 1790 Broadway, New York, N.Y.

National Urban League, Inc.—Membership: 25,000. President, Lindsley F. Kimball; secretary, Dorothy Hirshon; exec. dir., Whitney M. Young, Jr. Headquarters: 14 East 48th St., New York, N.Y., 10017.

National Woman's Christian Temperance Union.—Membership: 275,000 in 6,000 local unions. National convention: Chicago, Ill., Aug. 6–11, 1965. President, Mrs. Fred J. Tooz; secy., Mrs. Herman Stanley. Headquarters: 1730 Chicago Ave., Evanston, Ill.

Phi Beta Kappa.—Membership: 175,000 in 176 chapters and 63 associations. President, Whitney J. Oates; secretary, Carl Billman. Headquarters: 1811 Q St. NW, Washington, D.C., 20009.

Planned Parenthood-World Population (Planned Parenthood Federation of America).—Membership: 129 organizations. Annual meeting: New York City, Oct. 17–21, 1965. President, Alan F. Guttmacher, M.D.; secretary, Mrs. Stowe C. Phelps. Headquarters: 515 Madison Ave., New York, N.Y., 10022.

Rotary International.—Membership: 580,200 in 12,155 clubs. International convention: Denver, Colo., June 12–16, 1966. President, C.P.H. Teenstra; gen. secy., George R. Means. Headquarters: 1600 Ridge Ave., Evanston, Ill.

Special Libraries Association.—Membership: 6,000. National convention: Minneapolis, Minn., May 29–June 2, 1966. President, Alleen Thompson; exec. dir., Bill M. Woods. Headquarters: 31 East 10th St., New York, N.Y.

United Community Funds and Councils of America, Inc.—Membership: 1,277 communities representing approximately 2,200 local United Funds, Community Chests, and Community Health and Welfare Councils. Biennial conference: Toronto, Ontario Feb. 6–11, 1966. President, Ralph Lazarus; secretary, Mrs. M. Edmund Lunken. Headquarters: 345 East 46th St., New York, N.Y., 10017.

United States Jaycees, The.—Membership: 280,000 in 5,800 affiliated groups. Annual meeting: Detroit, Mich., June 27–30, 1966. President, James A. Skidmore, Jr.; exec. vice-pres., Jack A. Friedrich. Headquarters: Boulder Park, Box 7, Tulsa, Okla.

Veterans of Foreign Wars of the United States.—Membership: 1,703,000. National Convention: Chicago, Ill., Aug. 15–20, 1965. Commander-in-chief, Andy Borg; adj. gen., Julian Dickenson. Headquarters: V.F.W. Bldg., Broadway at 34th St., Kansas City, Mo., 64111.

World Council of Churches (United States Conference).—Membership: 30 churches or denominations in U.S. Annual meeting: Buck Hill Falls, Pa., April 20–22, 1966. Chairman, Charles C. Parlin; exec.-secy., Eugene L. Smith. Headquarters: 475 Riverside Dr., New York, N.Y., 10027.

Young Women's Christian Association of the U.S.A.—Membership: over 2,000,000. National convention: Boston, Mass., April 1967. President, Mrs. Lloyd J. Marti; gen. secy., Edith M. Lerrigo. Headquarters: 600 Lexington Ave., New York, N.Y., 10022.

Zionist Organization of America.—Membership: 100,000 in 600 districts. National convention: New York City, July 1–4, 1965. President, Jacques Torczyner; national secretary and executive director, Leon Ilutovich. Headquarters: 145 East 32d St., New York, N.Y., 10016.

SOCIOLOGY

In the field of sociology in 1965, new studies were published on race relations and on the contributions of Max Weber, Émile Durkheim, and Georg Simmel. Sociologists gave increased study to the use of computers in digesting and evaluating sociological data. The year also saw further development in the fields of transnational and applied sociology.

The Sociology of Max Weber. Five major papers on the contributions of Max Weber to sociology were published in the *American Journal of Sociology* (April 1965) in commemoration of the centenary of Weber's birth in 1864. Although Weber "consummated virtually no finished studies in any field," according to Paul Lazarsfeld, and although significant portions of his work are controversial, Weber receives widespread attention today by leading sociologists. According to Talcott Parsons, Weber's significance is found in the direction that he gave to "the development of sociology and related disciplines," and because he "laid out a large part of the macroscopic interests of social science as they come to focus in sociology."

Durkheim and Simmel. A new picture of Émile Durkheim's sociology in terms of five "constitutive ideas" or "unit ideas," is presented by Robert A. Nisbet in the introduction to *Émile Durkheim* (Englewood, N.J., 1965), a collection of selected essays on Durkheim by Merton, Alpert, Ginsberg, Selvin, and Bellah. These unit ideas are: personality, authority, the religio-sacred influences, and development. The concept of development is viewed as more than a process, and involves "the search for origins, the recapitulation of stages, the causes of development, and the direction of the assumed development."

In *Georg Simmel* (Englewood, N.J., 1965), the editor, Lewis A. Coser, assembled 12 views, past and present, of Simmel's ideas about sociology as a study of the forms of human association. Five essays discuss Simmel's sociology as seen "through the eyes of his contemporaries, namely, Durkheim, Tönnies, Von Wiese, Bouglé, and Mamelet," and seven represent current appraisals of Simmel's work, including those of Heberle, Sorokin, and Salomon.

Race Studies. Ten studies dealing with racial problems have been published in *Sociological Inquiry* (Winter, 1964–65). In the lead articles, Robin M. Williams finds that "racial distinctions have moved into a more central position in the total societal structure" of the United States. Reviewing race relations in the United States from 1944 to

1964 in terms of the relationship between prejudices and social structure, the article sees protest movements as emerging from the development of collectivities that have acquired "a sense of common fate." Minority groups are created to a significant degree "by the action of dominant groups." As a result, social systems in the United States are moving "toward an integrated mass society" that involves the breaking down of "segmented local structures, particularistic local structures, and categorical ethnic-racial divisions."

Intersociety Comparisons and Transnational Sociology. Intrasociety studies are being extensively supplemented by "systematic cross-societal comparisons." According to Robert M. Marsh ("The Bearing of Comparative Analyses on Sociological Theory," *Social Forces,* December 1964) hundreds of cross-societal comparisons have been made since 1950, and their influence on sociological theory is substantial. Comparisons of social data from different parts of the world represent the beginning of what has been called transnational sociology.

Applied Sociology. The increasing employment of sociologists in government, industry, international relations, education, religion, and social welfare is resulting in the development of applied sociology. Sociologists working in this area diagnose problems of particular social institutions by applying clinical methods in their study.

Sociological Methods. In 1965, sociologists continued to use computers as a more rapid means of making mathematical calculations to obtain standard deviations, partial and multiple correlations, variances and co-variances, linear least squares, and *t*-tests of sample means. A more advanced development is the use of high-speed electronic computers for retrieving specific information quickly from large amounts of computerized social data. For example, if the facts from several thousand articles and research reports on the many aspects of crime are properly selected, encoded, and fed to an electronic computer, a social researcher can later quickly obtain from the computer all the available references on any specific aspect of crime. Computers can also serve to test hypotheses deduced from theory, and to perform other "explorative functions." This increased use of computers requires the training of numerous sociologists in computer methods.

American Sociological Association. The association held its 60th annual meeting in Chicago from Aug. 30 to Sept. 2, 1965, under the general direction of the president, Pitirim A. Sorokin of Harvard University. Two hundred and fifty papers were presented on specialized sociological research. The 1966 annual meeting will be held in Miami Beach, Fla., from August 29 to September 1, with President Wilbert E. Moore presiding. Charles P. Loomis of Michigan State University was chosen president-elect for 1967.

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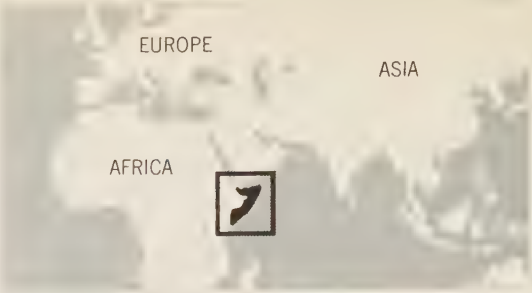
SOFTBALL. See SPORTS.

SOMALIA

SOMALIA · Information Highlights



Area: 246,201 square miles.
Population: 2,350,000 (1964 est.).
Chief City (1963 est.): Mogadiscio, the capital, 120,649.
Government: *President*—Aden Abdullah Osman (took office July 1, 1960); *Prime Minister*—Abdirizak Hagi Hussein (took office June 7, 1964). *Parliament*—National Assembly, 123 members; party seating (1965): Somali Youth League, 90; Somali National Congress, 15; others, 18.
Religious Faiths: Sunni Muslims, 99% of population; Roman Catholics, 0.1%; others, 0.9%.
Education: *Literacy rate*—10% of population. *Total school enrollment* (1962)—58,113 (primary, 56,519; secondary, 1,060; university, 534).
Finance (1965 est.): *Revenues,* $25,200,000; *expenditures,* $27,300,000; *monetary unit,* Somali shilling (7.143 shillings equal U.S.$1).
Gross National Product (1962): $77,000,000.
Economic Index (1964): *Cost of living,* 142 (1958=100).
Manufacturing: Sugar (1963), 9,000 metric tons.
Crops (metric tons, 1962–63 crop year est.): Bananas (1963–64), 110,000; maize, 46,500; sesame, 4,500.
Mineral: Salt (1964), 6,400 metric tons.
Foreign Trade (1964): *Exports,* $36,100,000 (chief export: bananas, $15,800,000); *imports,* $54,700,000 (chief imports, 1963: woven cotton fabrics, $3,600,000; rice, $3,000,000; agricultural machinery, $2,200,000). *Chief trading partners* (1963): Italy (took 49% of exports, supplied 27% of imports); Aden, incl. Arabia (took 40% of exports, supplied 3% of imports); USSR (supplied 14% of imports).
Transportation: *Roads* (1964), 8,004 miles (396 paved); *motor vehicles* (1964), 8,500 (automobiles, 3,800); *merchant vessels* (1964), 1 (7,000 gross registered tons); *principal airport,* Mogadiscio.
Communications: *Telephones* (1964): 2,500; *radios* (1963), 26,000; *newspapers* (1959), 1 (daily circulation, 2,000).

Following several parliamentary crises in the Somali Republic in 1965, Prime Minister Abdirizak Hagi Hussein pledged himself to solving the country's political problems by revamping his cabinet. He also promised to move ahead to realize the objectives of Somalia's five-year economic plan.

Relations with Ethiopia. Somalia's tense relations with Ethiopia flared into violence several times during 1965. Border clashes between Somali nomads and Ethiopian forces occurred in the Ogaden region. Each country accused the other of massing troops on its frontier in violation of the Khartoum agreement of March 1964, at which time they had pledged to withdraw their troops from the border and to refrain from hostile radio and press propaganda.

On October 27 the Somali and Ethiopian governments announced that they again had agreed to cease their hostile press and radio propaganda. The accord was reached at a meeting of the Organization of African Unity (OAU), in Ghana, October 21–25.

Relations with Kenya. Somalia's relations with Kenya also worsened during 1965. The deterioration resulted mainly from the militant acts of Somali nationals residing in Kenya. In October the Somali foreign ministry announced that Somali nationalists in Kenya's Northeastern Province had killed 108 Kikuyu and Meru tribesmen "in retaliation against the inhuman atrocities committed by Kenyan police and army units against innocent Somali people" in the area. Somalia claims that Kenya's Northeastern Province belongs to Somalia; Somalis living there have formed a "liberation army" to fight for the province's secession from Kenya.

Relations with Other Nations. In its relations with other countries, Somalia continued in 1965 to maintain a nonaligned position despite the fact that aid to Somalia from the Soviet Union exceeded that from Western nations.

Economy. In April the Somali government announced that West Germany had agreed to cover partially Somalia's recurring budgetary deficit of nearly $3 million. The republic's overall trade imbalance increased by $8.8 million between 1960 and 1964. President Aden Abdullah Osman called for greater consumption of local products as one means of relieving the adverse balance of payments.

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SOUTH AFRICA

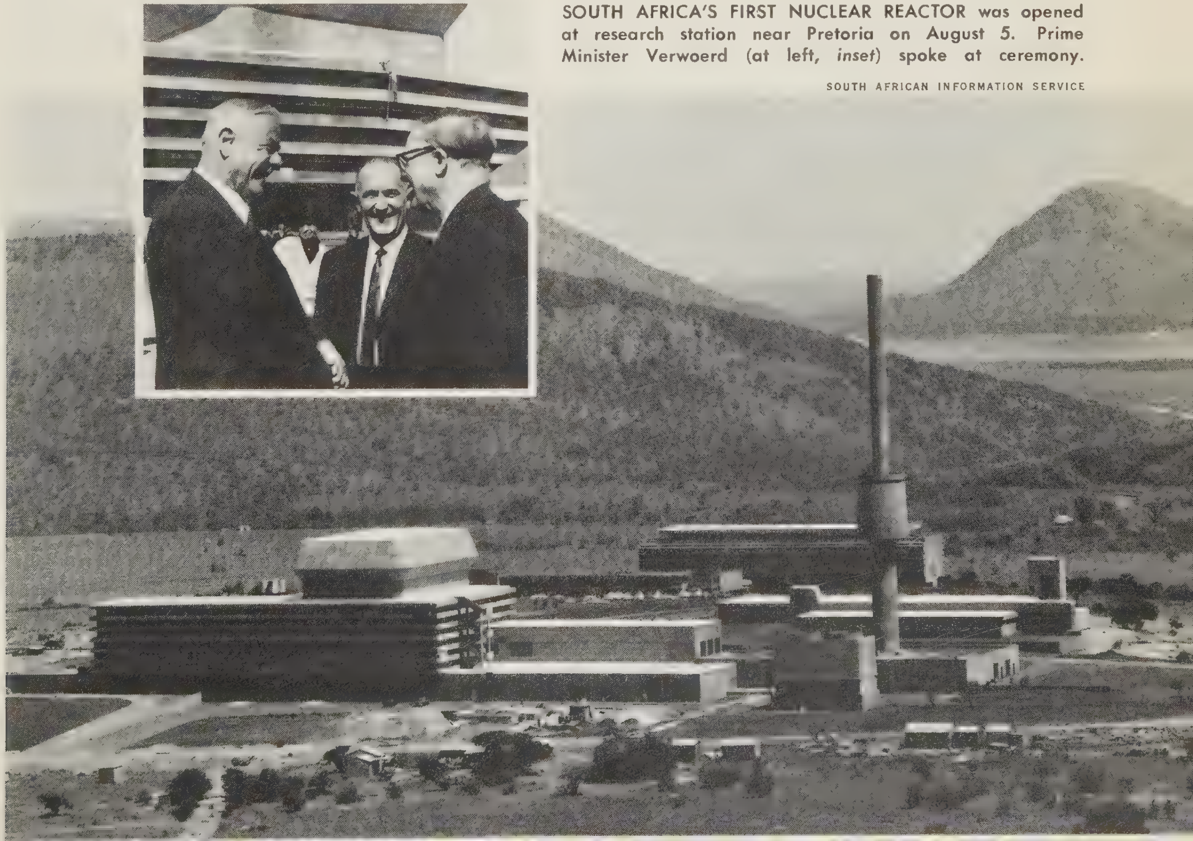
For South Africa, the year 1965 was one of moderate industrial growth and general economic prosperity. In the political field, it was a year in which further steps were taken to implement the government's policy of separate development for different races.

Elections. In preparation for the next general election, to be held no later than October 1966, the membership of the House of Assembly, the center of legislative power, was enlarged by the Constitutional Amendment Bill of March 3, 1965, from the original 150 to 160 seats for the republic, plus 6 seats for South West Africa. The 160 members are to be chosen in electoral divisions as follows: Cape of Good Hope, 54; Natal, 18; Transvaal, 73; Orange Free State, 15. In addition, 4 whites will be elected by qualified Colored voters in the Cape Province.

At the provincial council elections on March 24, 1965, the National party raised its number of seats in predominantly English-speaking Natal from 4 to 8, and gained 6 others. On November 26 these gains led to an increase to 30 for the Nationalist majority in the Senate, of which 43 of its 54 members are selected by provincial electoral colleges. Although the Progressive party finished last in the white constituencies it contested in March 1965, it won the Cape Provincial Council's two Colored constituencies, necessarily with white candidates.

Separate Development. The government in 1965 continued to promote separate institutions for the different racial groups in the country. In 1964 a provisional National Indian Council was convened to serve as a body through which the Department of Indian Affairs could consult on matters affecting that community. This council will be replaced eventually by a partially elected body. For Colored voters, who already had a nominated Council for Colored Affairs, provision was made in 1964 for a Colored Representative Council of 46, including 16 appointed members and 30 elected members chosen by universal franchise of all Colored persons. The first election is scheduled to be held in 1966.

Separate institutions for Africans are being established by tribal groups. The national African organizations, the African National Congress (established in 1912) and the Pan-Africanist Congress (which broke away from the former in 1959), have been banned since the Sharpeville incident of 1960, during which African demonstrators against the government's policy of requiring identity cards were fired upon by the police. The rural areas of the Transkei were the first to receive semiautonomous status under an all-African Legislative Assembly composed of 64 chiefs who were government endorsed and paid, and 45 members elected by universal franchise by Africans inside and outside that territory who qualify for its citizenship. The next area for which similar status to that of the Transkei is planned is Tswanaland, near Bechuanaland, although this territory has not had the long experi-



WIDE WORLD

SOUTH AFRICA'S FIRST NUCLEAR REACTOR was opened at research station near Pretoria on August 5. Prime Minister Verwoerd (at left, *inset*) spoke at ceremony.

SOUTH AFRICAN INFORMATION SERVICE

SOUTH AFRICA · Information Highlights

ASIA
AFRICA
SOUTH WEST AFRICA
SOUTH AFRICA

Area: 471,444 square miles.
Population: 17,474,000 (July 1, 1964 est.).
Chief Cities (1960 census): Pretoria, the administrative capital, 303,684; Cape Town, the legislative capital, 508,341; Johannesburg, 595,083; Durban, 560,010.
Government: *President*—Charles R. Swart; *Prime Minister*—Hendrik F. Verwoerd. *Parliament*—House of Asembly (160 representatives); party seating (1965): National Party, 107; United Party, 48; Progressive Party, 1; 4 representing the Colored voters of the Cape Province. Senate, 54 senators.
Religious Faiths: Protestants, 66% of population; Roman Catholics, 6%; others, 24%.
Education: *Literacy rate* (1960) 32% of Bantu population. *Total school enrollment* (1960)—2,758,797 (primary, 2,266,556; secondary, 365,886; teacher-training, 13,624; technical, 60,783; higher, 51,948).
Finance (1965 est.): *Revenues,* $1,384,000,000; *expenditures,* $1,898,000,000; *public debt* (1964), $4,150,000,000; *monetary unit,* rand (0.7143 rand equals U.S.$1).
Gross National Product (1964): $10,383,800,000.
National Income (1964): $8,749,000,000; average annual income per person, $500.
Economic Indexes (1964): *Manufacturing production* (1958=100), 160; *agricultural production,* 127 (1956–57=100); *cost of living,* 110 (1958=100).
Manufacturing (metric tons, 1964): Cement, 3,456,000; crude steel, 3,096,000; pig iron, 2,904,000; tin, 1,032,000; processed meat (1962), 574,000; wheat flour, 526,800; refined copper, 12,000.
Crops (metric tons, 1964–65 crop year): Maize, 4,172,000 (ranks 9th among world producers); citrus fruit, 416,000 (world rank, 11th); wool, greasy (1963), 145,500 (world rank, 5th); wheat, 1,059,000; potatoes (1963–64), 405,000; peanuts, 252,000; oats, 134,000; barley, 39,000.
Minerals (metric tons, 1964): Coal, 44,917,000 (ranks 13th among world producers); iron ore, 4,830,000 (world rank, 19th); manganese, 1,320,193 (world rank, 2nd); copper, 59,492 (world rank, 13th); uranium, 4,032 (world rank, 3rd); gold, 29,136,542 troy ounces (world rank, 1st); gem diamonds, 1,790,000 carats (world rank, 1st).
Foreign Trade (1964): *Exports,* $1,490,000,000 (chief exports: wool, $171,500,000; diamonds, $133,000,000); *imports,* $2,350,000,000 (chief imports: textile yarn, fabrics, 1962, $188,440,000; automobile chassis with engines, 1963, $112,434,000; petroleum products, 1963, $76,440,000). *Chief trading partners* (1963): Britain (took 30% of exports, supplied 30% of imports); U.S. (took 9% of exports, supplied 17% of imports); West Germany (took 5% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 206,000 miles (17,500 paved); *motor vehicles* (1964), 1,560,000 (automobiles, 1,250,000); *railways* (1963), 13,650 miles; *merchant vessels* (1964) 42 (221,000 gross registered tons); *national airline,* South African Airways; *principal airports,* Bloemfontein, Cape Town, Durban, Johannesburg.
Communications: *Telephones* (1964) 1,069,612; *radios* (1962), 1,151,000; *newspapers* (1961), 21 (daily circulation, 912,000).

ence with quasi-representative institutions of the Transkei.

The Transkei has two political parties: the Transkei National Independence party, led by Chief Minister Kaiser Matanzima, which supports separate development, the elimination of whites from the Transkei, and ultimate independence; and the Democratic party, led by Paramount Chief Victor Poto (who is supported by a majority of the elected members), which upholds principles of multiracialism for the Transkei and South Africa as a whole. With the support of both parties, the Transkei has abandoned after the first two years of primary school the "mother-tongue" instruction of the government's "Bantu education" system, and nearly all of its 1,600 schools have chosen English rather than Afrikaans as the major medium of instruction.

MODEL OF DAM for Orange River hydroelectric project is examined by engineer testing structure's spillway design.

"THE TIMES," LONDON

Poverty and lack of resources remain the Transkei's chief problem. Thus far, economic development in the African reserves and border areas has created fewer than 4,000 jobs a year, only a minute proportion of those now held in the so-called white areas by African migratory and domiciled workers. Private white capital may now invest in the government-controlled corporation established for the Transkei, but the Republic government maintains its ban on white entrepreneurs investing directly in Bantu "homelands," although Matanzima would welcome them.

South West Africa. In 1965 the International Court of Justice conducted oral proceedings on the South West Africa case, which was brought before it in 1960 by Liberia and Ethiopia, acting as former members of the League of Nations and on behalf of the independent African-controlled states. The plaintiffs ask the court to rule that the United Nations has inherited from the League of Nations the rights and responsibilities of supervising the mandate for South West Africa and that the practices of apartheid, enforced in that territory, are incompatible with South Africa's obligation to "promote to the utmost the material and moral well-being and social progress" of its inhabitants. Their objective is to force South Africa to change its policies of racial discrimination in South West Africa or to give up the territory.

In its defense, South Africa has maintained that its policies of racial separation are not only best for South West Africa but have worldwide validity.

UNITED NATIONS

PROTESTING SOUTH AFRICAN RACIAL POLICIES, many delegates left UN General Assembly when Foreign Minister Muller spoke on September 29.

Earlier, South Africa had invited the court to visit South West Africa for an on-the-spot inspection of the situation, but the court decided on November 29 to decline the invitation.

Racial Policies. Since Jan. 1, 1965, African (Bantus) are considered "temporary sojourners" in urban areas in terms of the Bantu Laws Amendment Act of 1964, although in practice their numbers may increase and their conditions improve. Since July 1, 1965, the rule has been in effect that only one servant may live on the premises of a white household, although there will be exemptions until alternative housing is available. Racially mixed audiences at sports events and public entertainment have been officially banned, though this also is subject to exemption.

Internal Security. The most publicized trial in 1965 was that of Abram Fischer, member of a distinguished Afrikaner family, and 13 others for activity in the banned Communist party. Twelve of the accused were found guilty. Fischer jumped bail in January 1965 and remained in hiding until rearrested in November. Hundreds of other trials in remote centers have involved little-known members of the banned African nationalist movements who are accused of sabotage and violence.

The Liberal party, which is nonracial and non-Communist, has been disorganized through the banning of more than 30 of its leaders. Other critics of the government, such as the Defense and Aid Fund (which seeks to support the dependents of those on trial or in prison), local offices of the liberal Institute of Race Relations, the Christian Institute, and the Durban office of the Progressive party, have been subject to police raids, confiscation of material, and questioning.

Despite strict regulations governing the reporting of conditions in prisons, the *Rand Daily Mail* published three articles by Harold Strachan describing brutal practices he had witnessed while a political prisoner. These were followed with descriptions of the use of electric torture. While such reports were not new, these led to raids on the newspaper, the loss of his passport by the editor, Laurence Gandar, and a series of trials for perjury that continued at the end of the year.

International Relations. South Africa maintains diplomatic relations with the British territories of Basutoland, Swaziland and Bechuanaland, all of which are rapidly approaching independence. Rhodesia's unilateral declaration of independence on Nov. 11, 1965, and British, U.S., and United Nations sanctions against its white regime, confront South Africa with a most delicate diplomatic situation.

South Africa's own ability to withstand sanctions, such as have been called for by the anti-apartheid African states, has been underscored by the UN Security Council's Expert Committee. In a 6-4 report on March 2, 1965, this body emphasized the necessity of a naval blockade to make such measures effective, pointed out the losses that the United Kingdom, in particular, would incur in the process, and raised the possibility that sanctions would lead to revolutionary chaos inside South Africa. Although the United Kingdom, in response to a United Nations resolution, has tightened its arms embargo on South Africa, and the United States has disallowed arms and aircraft sales to that country, other states —particularly France—have been meeting South Africa's demands.

Economic Development. The most economically advanced country in Africa, the Republic of South Africa accounts for 22% of the total production value of the African continent and nearly 50% of Africa's industrial output. About half of the total capital investment in Africa is centered in the republic. Each year South Africa produces about three fourths of the continent's steel, two thirds of its electric power, and four fifths of its coal. The country's modern transportation network annually carries half of all Africa's freight traffic, and its roads are traveled by over two fifths of all automobiles in Africa.

The economic boom that had been so striking since mid-1961 showed signs of slowing down in 1965, and the government took measures to fight inflation and to discourage imports in order to avoid a balance-of-payment crisis. The gross national product in 1964 totaled $10,383,800, representing an economic growth rate in real terms of 6.76%. While slightly below the impressive rate of 7.5% attained in 1963, the 1964 rate was well ahead of the 5.5% average annual rate planned under the country's first economic development program for 1965–69.

Planning continued on the giant $630 million, 30-year Orange River hydroelectric project. Bids were offered in 1964 for construction of two pivotal dams on the Orange River.

Mining and Manufacturing. South Africa, which produces more than half of the world's gold, increased its gold production by about 4% to 29,136,542 troy ounces in 1964. The total value of gold output exceeded $1 billion a year for the first time. Income from other mining operations, chiefly the production of diamonds, coal, iron ore, copper, and uranium oxide, rose by 17%.

Manufacturing industries operated at full capacity in 1964, and total manufacturing income rose by 19% over 1963. The important iron and steel industry increased production of pig iron over the previous year by 18% (to 3 million tons), of steel ingots by 10% (to 3 million tons), and steel castings by 13% (to 105,000 tons). Other metal industries reported similar increases.

Agriculture. Agricultural production failed to keep pace with the rest of the economy in 1964–65. Farm income fell in 1964 by 4.5% from the 1963 level because of lower crop production caused by poor weather.

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SOUTH CAROLINA

The principal events in South Carolina in 1965 were political. The governor resigned to fill the U.S. Senate seat left vacant by the death of Olin Johnston. Also, a South Carolina congressman bolted the Democratic party and won reelection as a Republican. Registration of Negro voters increased, but not to the degree expected.

Political Leadership. U.S. Senator Olin D. Johnston died on April 18. He had served the state as governor for 6 years, as U.S. senator for 20 years, and as the chief political leader for three decades. Donald S. Russell, after resigning as governor, was appointed to fill the vacant Senate seat, and was succeeded as governor by Robert E. McNair.

Following the example of U.S. Senator J. Strom Thurmond, who had bolted the Democratic party in 1964 to support Republican presidential candidate Barry Goldwater, Representative Albert Watson switched from the Democratic to the Republican party in 1965. He resigned his seat in the U.S. House of Representatives, and won easy reelection against Democratic opposition.

Both political parties began revamping their organizations, looking toward 1966, which, with elections for both U.S. Senate seats and for the governorship, will be a major political year for the state.

Voting Rights. South Carolina was named by the U.S. Census Bureau as one of seven Southern states in which less than 50% of the population over 21 has voted. By the end of 1965 there were about 175,000 Negroes registered in the state. Negro registration increased after enactment of the federal Voting Rights Act of 1965, but not so greatly as expected. The state is testing the constitutionality of the act by an appeal to the U.S. Supreme Court.

WIDE WORLD

SOUTH CAROLINA'S Donald Russell (r.), who entered U.S. Senate in 1965, is congratulated by (from left) Vice-President Humphrey, Governor McNair, and Senator Thurmond.

SOUTH CAROLINA · Information Highlights

Area: 31,055 square miles.
Population: 2,524,000 (1965 est.).
Chief Cities (1965 est.): Columbia, the capital (100,000); Charleston (79,500); Greenville (67,000); Spartanburg (47,000); Anderson (41,000); Rock Hill (31,800); Charleston Heights (24,500); Florence (24,000).
Government: *Chief Officers*—governor, Robert E. McNair (Democrat); secy. of state, O. Frank Thornton (D); atty. gen., Daniel R. McLeod (D); treas., Jeff B. Bates (D); supt. of education, Jesse T. Anderson (D); chief justice, Claude A. Taylor; *Legislature*—General Assembly (convened Jan. 12, 1965); Senate, 46 members (46 Democrats, 0 Republicans); House of Representatives, 124 members (123 D, 1 R).
Education: *School enrollment* (1964–65)—public elementary, 408,800 pupils (13,100 teachers); public secondary, 250,900 pupils (10,334 teachers); nonpublic schools, 18,200 pupils (850 teachers); college and university (fall 1964), 39,033 students. *Public school expenditures* (1964–65)—$170,350,000 ($289 per pupil); average teacher's salary, $4,450.
Public Finance (fiscal year 1965): *Revenues*, $578,642,659 (3% sales tax, $93,288,138; motor fuel tax, $63,951,915; federal funds, $99,424,154). *Expenditures*, $561,244,676 (education, $173,943,400; health, welfare, and safety, $63,967,450; roads and highways, $98,146,761). *State debt*, $173,573,500 (June 30, 1965).
Personal Income (1964): $4,229,000,000; average annual income per person, $1,655.
Public Assistance (fiscal year 1964): $36,493,000 (aged, $13,258,000; dependent children, $5,823,000).
Labor Force (employed persons, July 1965): *Agricultural*, 153,000; *nonagricultural* (wage and salary earners), 670,400 (43.5% manufacturing, 16.7% trade, 15.4% government). *Unemployed persons* (July 1965)—36,600.
Manufacturing (1963): Value added by manufacture, $2,117,387,000 (transportation equipment, $7,472,000; primary metals, $11,175,000; nonelectrical machinery, $74,142,000; electrical machinery, $33,715,000; fabricated metals, $33,493,000; food and products, $97,665,000).
Agriculture (1964): *Cash farm income*, $421,196,000 (livestock, $111,714,000; crops, $288,046,000; govt. payments, $21,436,000). *Chief crops* (tons)—cottonseed, 228,000 (ranks 10th among the states); oats, 104,000 (rank, 20th); tobacco, 77,000; (rank, 4th); peaches, 26,400 (rank, 8th); sweet potatoes, 26,000 (rank, 9th); rye, 15,000 (rank, 14th).
Mining (1964): *Production value*, $38,713,000 (ranks 42nd among the states). *Chief minerals* (tons)—stone, 6,109,000; sand and gravel, 4,622,000; clays, 1,743,000.
Fisheries (1964): Commercial catch, 21,723,000 pounds ($3,001,000). *Leading species*—Hard blue crabs, 9,436,000 pounds ($375,000); spot fish, 3,166,800 pounds ($213,000); shrimp, 2,632,000 pounds ($861,000); oysters, 2,511,000 pounds ($997,000).
Transportation: *Roads* (1965), 56,523 miles (34,713 surfaced); *motor vehicles* (1964), 1,015,000; *railroads* (1963), 3,266 miles; *aircraft* (1964), 855 (99 airports).
Communications: *Telephones* (1965), 733,900; *television stations* (1964), 10; *radio stations* (1964), 104; *newspapers* (Jan. 1, 1965), 17 (daily circulation, Sept. 30, 1964: 513,809).

Legislature. The General Assembly enacted very little significant legislation during the year. It did, however, strengthen the state's safety laws, grant small salary raises to state employees and teachers, give additional support to higher education, and establish a number of agencies to administer federal Economic Opportunity Act programs. A number of committees were created to study many of the state's most pressing questions, including small-loan problems, election laws, reapportionment, services for the blind, job classification and pay of state employees, and various phases of education. The legislature appropriated $254 million for general purposes and $67 million for highways.

A federal court order directed that the South Carolina Senate be reapportioned by April 1, 1966. A special session of the General Assembly met in December to work out a plan to ensure representation on the basis of population instead of the present system of one per county.

Education. Most of South Carolina's school district plans for integration have been approved, and integration progressed rapidly during the year. The validity of the state's tuition grant program to students in private schools is being tested in the federal courts. The state continued to emphasize programs designed to reduce dropouts and to train persons without a high school education.

Economy. All major indicators of economic growth showed a rise in 1965, chiefly as the result of general industrial development and wage increases in textile and other manufacturing. Over $600,000,000 was invested in industrial expansion, with major expansions occurring in the textile and chemical industries. The rate of unemployment was well below the national average.

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SOUTH DAKOTA

Nils Boe, a Republican, was inaugurated as the 23rd governor of South Dakota on Jan. 5, 1965. He began his term with a Republican-dominated Legislature, which convened on January 19 for a 45-day session.

Reapportionment. The major problem facing the Legislature was the reapportionment of both houses in accordance with the "one-man, one-vote" decision of the U.S. Supreme Court. The initial plan put forward by the Republicans was opposed by the Democrats, who used the added strength of their increased representation in the Legislature to block passage of the measure.

To satisfy both parties, adjustments were made in the reapportionment bill before it was passed on the eve of adjournment. Under the plan agreed upon, the boundary line dividing the 1st and 2nd congressional districts was moved eastward in order to equalize the populations of the two districts.

Legislation. The Legislature appropriated a total of $116,683,452 for the fiscal year 1965. The sales tax was broadened and raised from 2% to 3%. Although $6 million of the general appropriations bill was struck down by the State Supreme Court as unconstitutional, the rest of the bill and the sales tax bill were found to be constitutional by the court.

The Legislature also broadened the authority of county commissioners and provided compromise legislation concerning the jurisdictions of the rival rural electric cooperatives and private power companies.

Education. State aid to public schools was increased from $10,000,000 to $15,000,000, and a new division of vocational education was created. Appropriations for state-supported institutions of higher learning were increased by $7,000,000—20% over the amount for the previous biennium.

On June 29 the State Board of Regents raised entrance requirements for the seven state-supported colleges and universities. Only resident students from the upper two thirds of their graduating classes, and nonresident students from the upper one half of their graduating classes, will be eligible to enter the institutions.

Politics. On September 8, Charles A. Howard, Jr., was chosen Republican state chairman. Richard Murphy, an attorney, announced his candidacy for the Republican nomination for U.S. senator in the June 1966 primary election.

Floods. Flooding caused considerable damage in South Dakota in 1965. During the first two weeks of April, streams in the eastern part of the state overflowed, and in the middle of May, flash floods in the northern Black Hills caused damages estimated at $6 million.

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SOUTH DAKOTA · Information Highlights

Area: 77,047 square miles.
Population: 711,000 (1965 est.).
Chief Cities (1965 est.): Pierre, the capital (11,200); Sioux Falls (70,500); Rapid City (49,000); Aberdeen (24,500); Huron (14,800); Watertown (14,300); Mitchell (12,700); Brookings (11,600).
Government: *Chief Officers*—governor, Nils A. Boe (Republican); lt. gov., Lem Overpeck (R); secy. of state, Alma Larson (R); atty. gen., Frank L. Farrar (R); treas., Lloyd Jorgenson; supt. of public instr., M.F. Coddington; presiding judge, Everett D. Roberts. *Legislature* (convened Jan. 19, 1965)—Senate, 35 members (18 Republicans, 16 Democrats, 1 Independent); House of Representatives, 75 members (45 R, 30 D).
Education: *School enrollment* (1964–65)—public elementary, 131,700 pupils (6,100 teachers); public secondary, 44,800 pupils (2,380 teachers); nonpublic schools, 26,700 pupils (950 teachers); college and university (fall 1964), 19,600 students. *Public school expenditures* (1964–65)—$67,000,000 ($416 per pupil); average teacher's salary, $4,475.
Public Finance (fiscal year 1964): *Revenues,* $157,299,000 (2% sales tax, $17,976,530; motor fuel tax, $16,773,000; federal funds, $57,181,000). *Expenditures,* $159,410,000 (education, $36,637,000; health, welfare, and safety, $17,253,000; highways, $71,184,000). *Net long-term debt,* $11,791,000.
Personal Income (1964): $1,343,000,000; average annual income per person, $1,879.
Public Assistance (fiscal year 1964): $14,882,000 to 19,301 recipients (aged, $5,966,000; dependent children, $3,996,000).
Labor Force (employed persons, July 31, 1965): *Agricultural,* 85,950; *nonagricultural* (wage and salary earners), 151,650 (8.8% manufacturing, 26.5% trade, 29.5% government). *Unemployed persons* (July 31, 1965)—7,350.
Manufacturing (1963): Value added by manufacture, $142,230,000 (lumber and wood products, $4,535,000; printing and publishing, $12,474,000; stone, clay, and glass products, $7,714,000; fabricated metals, $4,371,000; food and products, $96,459,000).
Agriculture (1964): *Cash farm income,* $743,343,000 (livestock, $500,310,000; crops, $175,102,000; govt. payments, $67,931,000). *Chief crops* (tons)—hay, 4,529,000 (ranks 8th among the states); corn for grain, 2,252,000 (rank, 11th); oats, 1,141,000 (rank, 5th); wheat, 1,127,000 (rank, 14th); barley, 141,000 (rank, 14th); rye, 91,000 (rank, 2nd); sugar beets, 126,000.
Mining (1964): *Production value,* $52,824,000 (ranks 41st among the states). *Chief minerals* (tons)—uranium, 110,147 (rank, 6th); gypsum, 19,000 (rank, 9th); gold, 616,913 troy ounces (rank, 1st); silver, 133,000 troy ounces (rank, 11th); feldspar, 30,218; crude petroleum, 247,000 barrels.
Fisheries (1963): *Commercial catch,* 3,719,000 pounds ($157,000).
Transportation: *Roads* (1965), 87,179 miles (55,152 surfaced); *motor vehicles* (1965), 374,601; *railroads* (1964), 4,489 miles; *airlines* (1965), 5 (209 airports).
Communications: (1965): *Telephones,* 267,800; *television stations,* 10; *radio stations,* 26; *newspapers,* 12 (daily circulation, 171,038).

SOUTH SEA ISLANDS. See Pacific Islands.

SOUTH WEST AFRICA. See South Africa; United Nations.

SOUTHEAST ASIA TREATY ORGANIZATION. See Asia.

SOUTHERN RHODESIA. See Rhodesia.

SOVIET LITERATURE

The 1965 Nobel Prize in literature was awarded on October 15 to Mikhail Sholokhov, whose epic novel *The Silent Don* (1928–40) reflects the first years of the 1917 revolution and the havoc of the civil war that followed. The Moscow press interpreted the award as a recognition of Soviet literature and its most glorious representative. Many people in the West wondered whether the decision of the Swedish Academy was purely nonpolitical. Previous Russian winners of the literary prize had been Ivan Bunin (1933), an anti-communist exile, and Boris Pasternak (1958), a nonpolitical writer who had not been allowed to have his novel *Doctor Zhivago* published in the Soviet Union. The academy may have wanted to stress its objectivity by honoring a Russian writer who is a member of the Communist party and a deputy of the Supreme Soviet. (See Nobel Prizes.)

Government Controls. Rigid government control of the arts alternated throughout 1965 with various signs of liberalization. The liberation of Joseph Brodsky, a Leningrad poet who had been sent to a work camp in 1964 as "an idler and a parasite," was followed by the arrest of the literary critic Andrei Sinyavski in September 1965. He was to be placed on public trial for allegedly writing anti-Soviet literature and for smuggling it to the West. Earlier, a large volume of Pasternak's poems, with an introductory essay by Sinyavski, had been cleared by government censors. For the first time, translations of works by Franz Kafka were allowed to be published in book form. Bunin's collected works, in a new revised edition, were hailed by the critics. Works of another émigré, the poet Marina Tsvetayeva (who committed suicide in 1941 on her return to Russia), were scheduled for publication in 1966. At the same time, however, several good writers were reduced to silence by preventive censorship. Among them was Aleksandr Solzhenitsyn, who had won international recognition for his tale of Stalinist concentration camps, *One Day in the Life of Ivan Denisovich* (1962). Moscow intellectuals greatly resented these inconsistencies.

War Literature. The 20th anniversary of the end of World War II (1945) gave rise to numerous books. Among the memoirs, the most vivid was *The Struggle for the Second Front* by Ivan Maiski, Soviet ambassador to Britain during the war. The most informative, although badly written and burdened with technical details, was *1945* by Marshal Ivan Konev. The best works of war fiction were *The Bonfire* by the veteran novelist Konstantin Fedin; *The Last Two Weeks* by Aleksandr Rozen, who depicts the period just preceding Hitler's invasion of the USSR; and *July 1941*, a moving realistic narrative of the first weeks of the Nazi invasion, by Grigori Baklanov.

Other Fiction. *Seven Under the Same Roof*, by a newcomer, Vitali Syomin, created a stir in literary circles. An account of the dull and harsh life led by young people in a provincial town, the novel does not shy away from reporting grim episodes such as murder. The tone and form of this realistic narrative differ from the optimism and standard slogans of conventional Soviet prose. Anatoli Rybakov's *Summer in Sosnyaki* portrays unusual characters and discloses dark aspects of Communist reality that are rarely mentioned by officially approved writers. Another interesting work is *I Am Responsible for Everything*, the last part of a trilogy by Yuri Gherman. Within an involved and romantic plot, it presents emotions and adventures of peoples who return from the war and have great difficulties fitting into life in a small town.

KEYSTONE

MIKHAIL SHOLOKHOV was awarded the Nobel Prize in literature for 1965.

Off the beaten track are Vladimir Chivilikhin's *The Reeling Pines*, about a forest-fire brigade, and Vadim Andreyev's *The Wild Field*, a first-hand account of French underground resistance against the Nazis during World War II. The author of *The Wild Field* is the son of the prerevolutionary writer Leonid Andreyev.

Shield and Sword, a pseudo-thriller by Vadim Kozhevnikov, was met with approval in the Communist press because it glorifies Soviet spies who infiltrated Nazi ranks during the war. It is a ridiculous, inflated, and artificial attempt to create an "anticapitalist espionage novel." Nataliya Ilina's *The Return* is not much better. It depicts Russian exiles in the Far East who repent and become loyal Communist party members. However, this kind of ready-made literature is diminishing in quantity and is losing popularity.

Mikhail Bulgakov's *The Theatrical Romance*, a lively and hilarious satire on the Moscow Art Theatre, was not published until 1965, although the author died in 1940. This unfinished work could not have been published in the period when Stalin was in power.

Poetry. Yevgeni Yevtushenko's series of poems, *The Power Station of Bratsk*, tries to convey the sense of Russian history and to link the nation's past and present, but only a few parts of this ambitious project are successful. *The Knot*, a collection of lyrical poems by Olga Berggolts, is particularly poignant when she speaks of her husband who was executed during the Stalinist purges. Poems by Andrei Voznesenski and Bella Akhmadullina were among the best of the year.

Marc Slonim
Director, Sarah Lawrence College Foreign Studies

SOVIET UNION. See Union of Soviet Socialist Republics.

SPACE EXPLORATION

UPI

SPACE "WALK" by astronaut Edward White highlighted the flight of Gemini 4 in June.

SPACE EXPLORATION

Intense activity by the United States and the Soviet Union in the development of manned space flight, the exploration of space by unmanned vehicles, and the use of unmanned spacecraft for transmitting weather and communications data highlighted space exploration in 1965. Questions concerning possible hazards to astronauts arising from energetic radiations, weightlessness, and close confinement still cause concern in planning for longer flights.

This article discusses developments in space exploration under the following headings: (1) Manned Space Flight; (2) Earth Satellites and Space Probes; (3) Astronautics: Space Science and Technology.

MANNED SPACE FLIGHT

The American manned space flight program in 1965 was centered on a series of Gemini flights of increasing complexity. These flights dealt with space flight questions for which answers could be obtained only by placing man in the space environment.

In preparation for his flight in space, each Gemini astronaut spent more than 100 hours of training with mission simulators and participated in detailed briefings concerning the ship, the flight, and the tasks to be performed. Each crew participated in, or monitored, the systems checks and the other preparations for flight, and each practiced as many of the flight tasks as possible.

Gemini Flights. The Gemini spacecraft, an enlarged version of the Mercury vehicle, is launched by the Titan 2 rocket, which is larger than the Atlas rocket used for Mercury flights. The spacecraft, which weighs about 7,100 pounds at launching, is 18 feet 5 inches long, 10 feet across at the big end, and 39 inches across at the small end.

The equipment section at the big end holds batteries, fuel for control and maneuver systems, and oxygen. The next inner section holds the retrograde rockets used for reentry. The equipment section is jettisoned just before the rockets are fired for reentry; the retrograde section is jettisoned after they have been fired. What is left of the Gemini craft constitutes the reentry module, a vehicle 11 feet long and 7½ feet across at the big end. It contains

WIDE WORLD

WIDE WORLD

LIFT-OFF. Rocket carrying maneuverable Gemini 3 spacecraft rises from pad at Cape Kennedy on March 23. (*Left*) Prior to flight, astronauts Grissom (foreground) and Young wait in capsule while technician makes check of equipment.

three sections: the cabin for the astronauts, the adjoining section housing the reentry control system, and a section at the small end for parachutes and rendezvous radar.

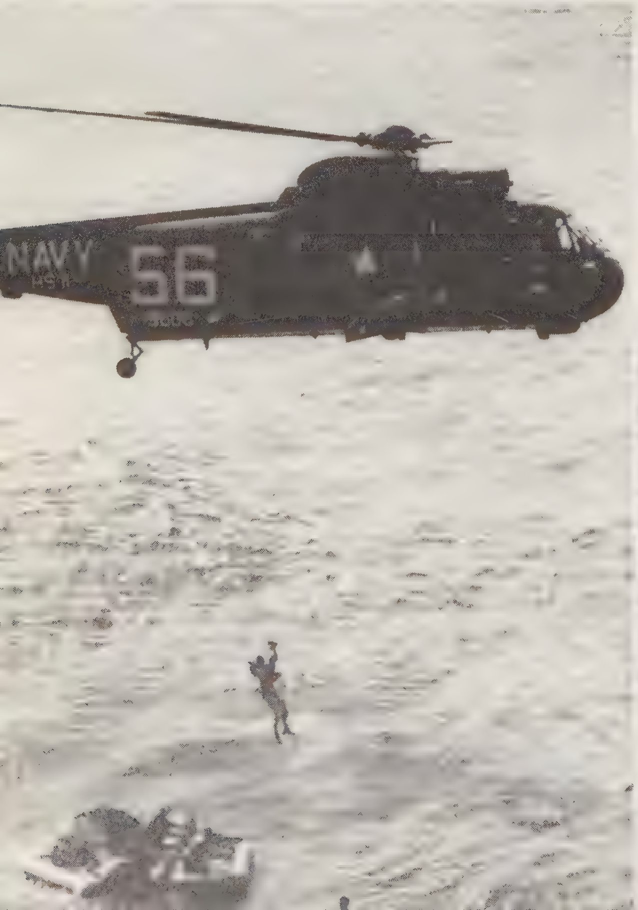
The astronauts' section, which has 50% more room than the Mercury cabin, holds two men who sit side by side. Experimental instruments and support equipment for the astronauts are nearby. There is a hatch above each astronaut for entry or escape. The compartment is pressurized, but each crew member wears a pressurized suit during all or part of the flight.

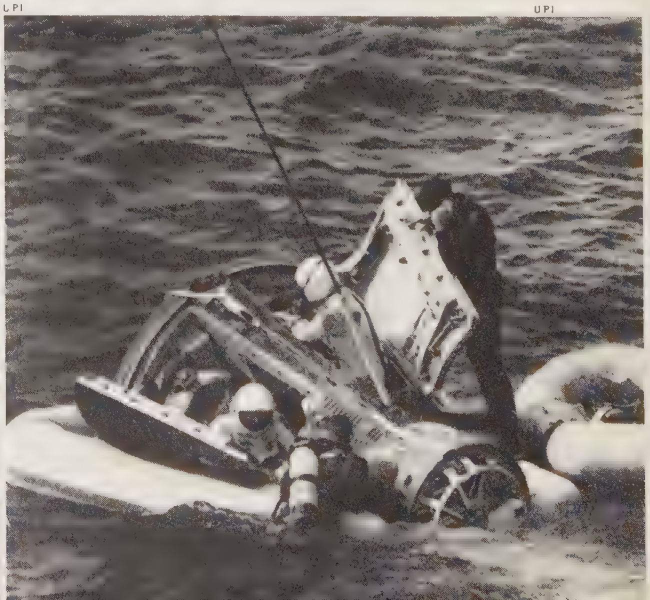
Each Gemini spacecraft is tracked around the world by a manned space flight network consisting

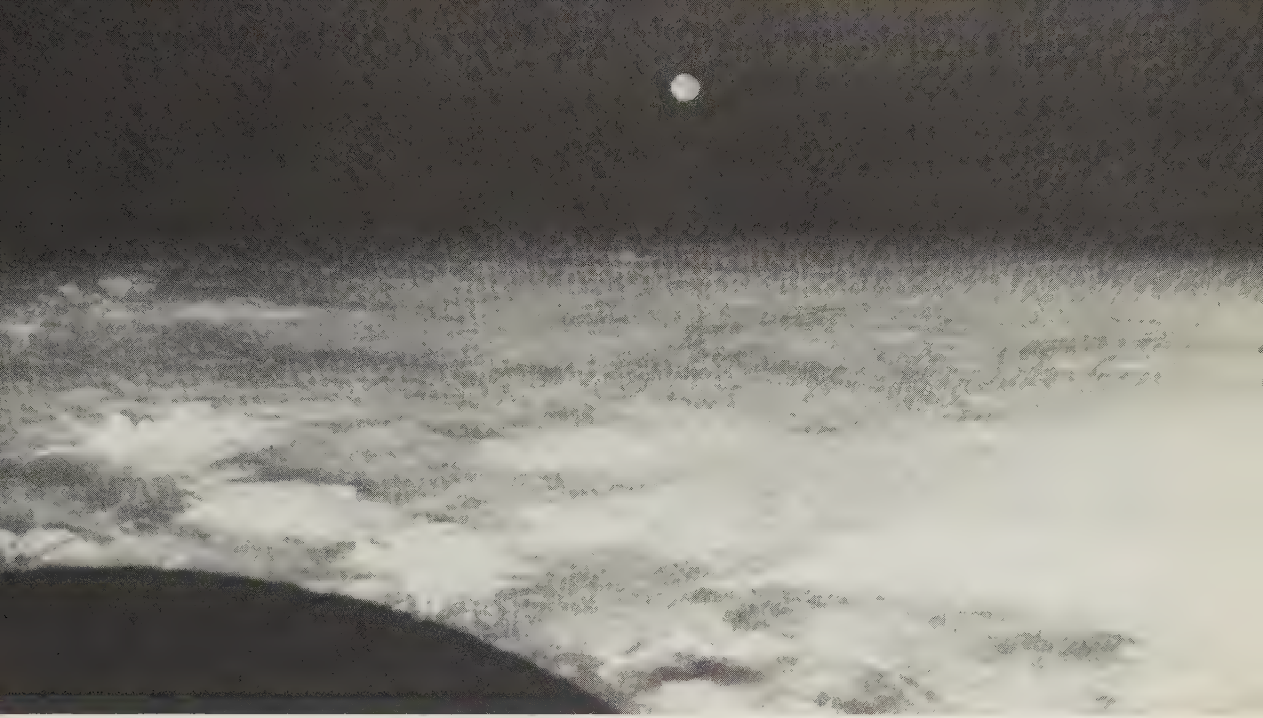
RECOVERY. (*Left*) Helicopter picks up astronaut James Lovell after Gemini 7 flight in December. (*Below*) Gemini 6 astronauts Walter Schirra and Thomas Stafford prepare to leave the capsule after space rendezvous with Gemini 7.

UPI

UPI






UPI

EARTH'S HORIZON AND MOON, as photographed from the Gemini 7 space capsule.

of seven primary land stations and three ships. An additional six stand-by land stations are ready if needed. Primary mission control is located in the Manned Spacecraft Center in Houston, Texas. Real-time (no-delay) computing centers are in Greenbelt, Md., and Houston, Texas.

All Geminis were launched from Cape Kennedy, Fla., and made their descent into the Atlantic Ocean southeast of Florida. They were recovered by ship, as were the Mercury vehicles.

Gemini 3. The first manned Gemini flight, Gemini 3, had a perfect launching on March 23, 1965, with astronauts Virgil I. Grissom and John W. Young aboard. Grissom was the first man to have been launched twice into space, and this flight was the first time an American had a companion in space.

The Gemini 3 flight probably also marked the first time that any astronaut significantly changed the orbit of a spacecraft. Using small rocket thrusts, the astronauts maneuvered the spacecraft by changing its attitude (angular orientation) and its translational motion (along a straight line). This capability to maneuver was used for the first controlled reentry into the earth's atmosphere. Reentry was nearly perfect, except for being off target by 60 miles. Gemini 3, which made 3 orbits and was in flight for 4 hours and 53 minutes, showed that spacecraft could be maneuvered for rendezvous and dock-

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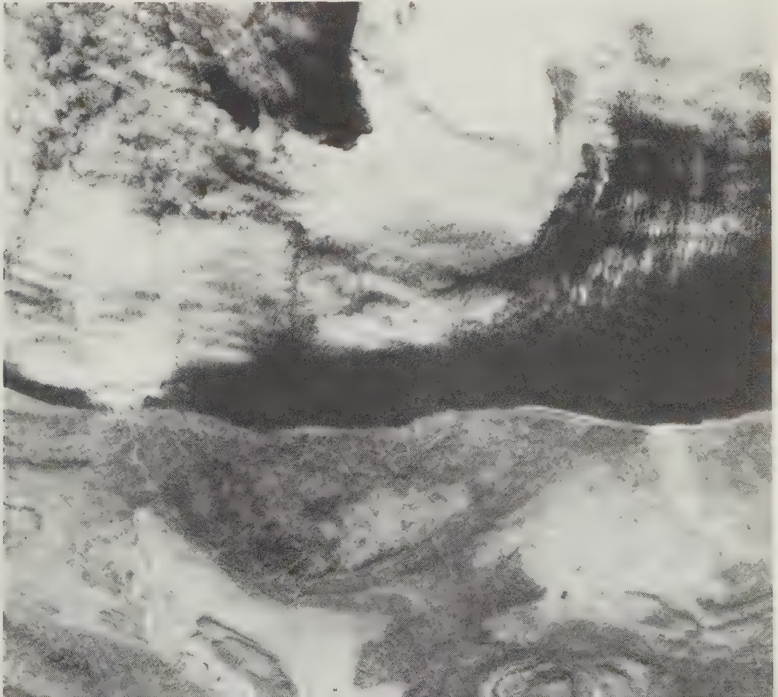
GEMINI 5 PHOTOGRAPH, taken during eight-day flight in August, shows the west coast of Morocco (foreground) with cloud formation over Atlantic Ocean.

ing operations, which are needed for the Apollo project to make a round trip to the moon.

Gemini 4. Gemini 4, launched on June 3, carried James A. McDivitt and Edward H. White II on a record-shattering 62-orbit flight that lasted 97 hours and 48 minutes.

During the first orbit, an attempt was made to achieve a rendezvous by maneuvering Gemini 4 toward the upper stage of the Titan 2 rocket. This first test of achieving rendezvous by visual sightings was not completed successfully because the supply of gas for maneuvering had to be conserved.

Walk in Space. An important step toward interplanetary space flight was taken during the Gemini 4 flight. On June 3, at the beginning of the third orbit, White emerged from the capsule and stepped out into space. He was the first American—and the second man—to perform this feat. His excursion followed a similar one made by Aleksei A. Leonov of the USSR on March 18. For White's maneuver, the pressure in the Gemini cabin was reduced to vacuum conditions to enable the astronaut to emerge directly from his capsule hatch. During the walk in space, both White and McDivitt were in a vacuum environment from which they were protected only by their pressurized suits.

When White left the Gemini 4, it was traveling at a speed of about 17,000 miles per hour relative to the earth's surface. White, traveling at the same speed, continued in the same orbit as his craft. He was not directly aware of the high speed, however.

Outside the Gemini, White remained attached to the spacecraft by a 25-foot gold-colored cord that contained lines for his oxygen supply, communications, and medical data. An emergency oxygen supply was strapped to his chest. To be able to maneuver and change his own personal orbit, he also carried a small jet gun that released bursts of oxygen gas from small bottles attached to the gun. These short bursts enabled him to move about. In addition, he was able to pull on a strong nylon safety line that was part of the tether.

TITAN 2 BOOSTER ROCKET for Gemini 5 space flight is salvaged in Atlantic Ocean after lift-off on August 21.

WIDE WORLD

The world kept in touch with White via his tether. It was estimated that 50 million Americans listened to broadcasts while the first American to walk in space talked as he tested his new position. At the same time, pictures were being taken by McDivitt from inside the cabin, and by a 16-mm. movie camera mounted by White on the spacecraft at the beginning of his walk. White found his sojourn in space so thrilling that he remained out of Gemini 4 for 20 minutes—eight minutes longer than scheduled.

After White had safely reentered the capsule, the hatch resisted efforts to lock it shut, but the astronaut was able to close it. The cabin, again sealed against space, was then repressurized, and the planned duration of the flight was fulfilled.

White's walk is significant because similar movements of men in space, very likely without tethers, will be necessary to assemble the equipment needed for long-distance flights and heavy spacecraft. The separate parts, which will be placed in orbit by a number of rockets, will be assembled while in earth orbit. Interplanetary flights will begin from an earth orbit, not from the earth.

Living Conditions. Living in a cabin in space for a number of days is still in the experimental stage. During every 24 hours of the Gemini 4 trip, McDivitt and White were supplied with four meals stored in separate packages. The meals included freeze-dried products, dehydrated foods, and compressed bite-sized bits. The dehydrated foods were reconstituted by adding water. To prevent unpleasant odors from spoiled left-over food, a disinfectant tablet was put into each used food pouch before it was reclosed. All the other essential needs of a human being were meticulously taken care of.

It was feared that the men might suffer from inertness in a confined space, boredom, and prolonged weightlessness. Part of the astronauts' program during their waking periods consisted of taking special exercises with a flexible cord. In order to avoid boredom, the astronauts had a busy schedule of work activity that included reading instruments, reporting to ground stations, and performing scientific and technological experiments. Many important tests and measurements were made of the physical condition and reactions of the astronauts; for example, pulse and temperature data were obtained continuously.

Reentry. The Gemini 4 computer system necessary for calculating reentry data did not function. All pertinent information for landing had to be transmitted by radio from the spacecraft to the ground, where results were computed and radioed back to the ship. The procedures worked successfully, and the reentry was excellent, demonstrating once again the importance of the crew's judgment in space flight.

Gemini 5. On August 21, Gemini 5 rocketed into space, carrying L. Gordon Cooper, Jr., and Charles Conrad, Jr., for a 120-orbit ride that lasted 190 hours and 56 minutes. This was the longest manned space flight that had ever been made. It was Cooper's second ride in orbit, and he set a new world record for the total time spent by an astronaut in space. The Gemini 5 orbit had the highest apogee of any American manned flight—an altitude of 219 miles.

Gemini 5's eight-day flight time was roughly equal to the time required for a flight to the moon and back. An important purpose of the flight was to clarify questions concerning man's ability to survive and

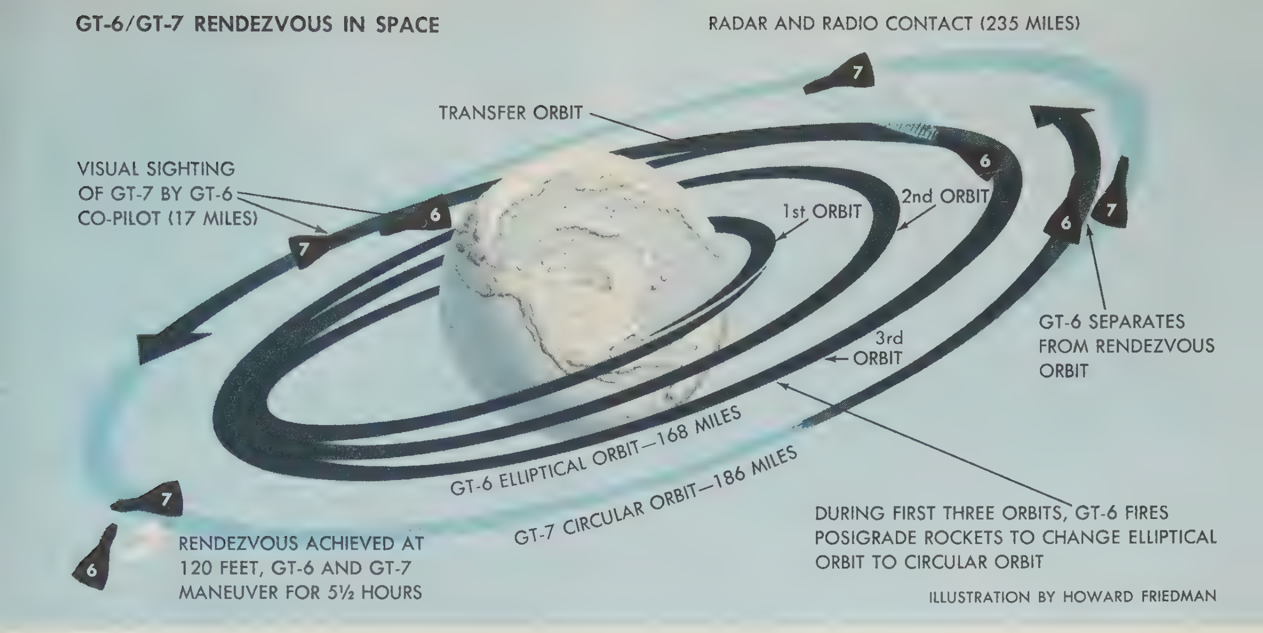
GT-6/GT-7 RENDEZVOUS IN SPACE
RADAR AND RADIO CONTACT (235 MILES)
TRANSFER ORBIT
VISUAL SIGHTING OF GT-7 BY GT-6 CO-PILOT (17 MILES)
1st ORBIT
2nd ORBIT
3rd ORBIT
GT-6 SEPARATES FROM RENDEZVOUS ORBIT
GT-6 ELLIPTICAL ORBIT—168 MILES
GT-7 CIRCULAR ORBIT—186 MILES
DURING FIRST THREE ORBITS, GT-6 FIRES POSIGRADE ROCKETS TO CHANGE ELLIPTICAL ORBIT TO CIRCULAR ORBIT
RENDEZVOUS ACHIEVED AT 120 FEET, GT-6 AND GT-7 MANEUVER FOR 5½ HOURS
6
7

ILLUSTRATION BY HOWARD FRIEDMAN

RENDEZVOUS IN SPACE between Gemini 6 and 7 on Dec. 15, 1965, is shown in this schematic diagram.

carry out purposeful activity in the space environment for periods long enough for a lunar expedition. The most significant result of the Gemini 5 flight was to demonstrate that astronauts can endure eight days in orbit and perform work assignments in good physical condition and in good spirits.

Power Failure. Before the second orbit of Gemini 5 was completed, trouble developed in the craft's electrical power supply. The power source was new; it consisted of two fuel cells that replaced conventional batteries. In a fuel cell, gaseous hydrogen and oxygen combine chemically to form water and to generate electricity directly. The saving in weight gained by use of fuel cells instead of batteries permitted Gemini 5 to carry the first radar equipment for a rendezvous operation.

Improvement in the power supply began on the second day of the flight and continued until full electrical power was achieved. Consequently, significant parts of most scheduled tasks were performed. The only complete failure was the planned effort to achieve a rendezvous with a 76-pound pod ejected from the Gemini. By the time sufficient power was available for radar transmission, the pod and the spacecraft had drifted too far apart to attempt a rendezvous. Instead, a simulated rendezvous was substituted, wherein the spacecraft maneuvered to a new position after radar contact with the ground.

GEMINI RENDEZVOUS marked a major step forward in the U.S. effort to place a man on the moon by 1970. These photos of Gemini 7 were taken from Gemini 6 while the spacecraft flew together on Dec. 15.

UPI: PICTORIAL PARADE

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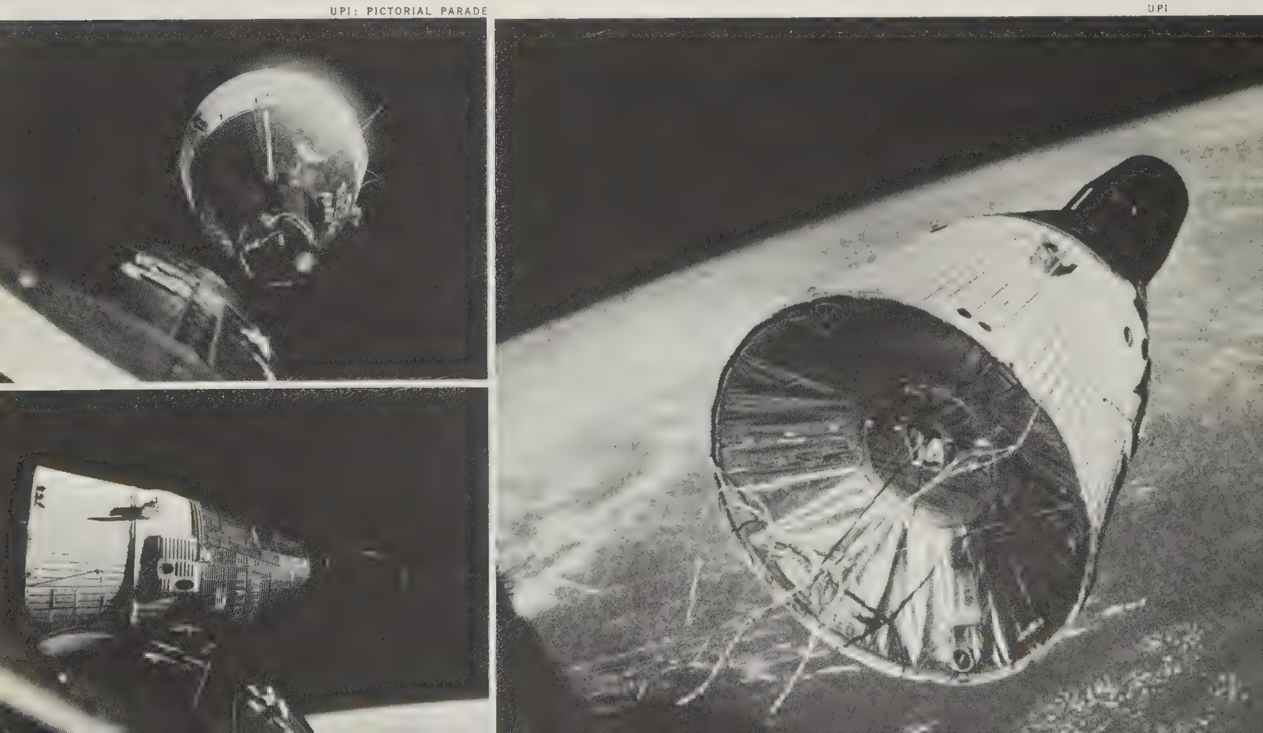
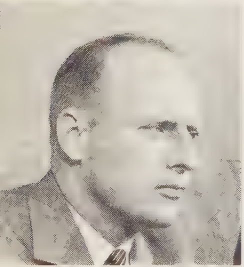


NASA

VIRGIL IVAN GRISSOM, an Air Force lieutenant colonel, was born in Mitchell, Ind., on April 3, 1926. A World War II veteran (1944–45), he graduated from Purdue University in 1950, rejoined the Air Force, and flew missions in Korea. After aeronautical engineering study and test pilot duty, he was selected to be an astronaut in 1959. He made a suborbital flight in 1961. Grissom married Betty L. Moore; they have two sons, Scott and Mark.

WIDE WORLD

JAMES ALTON MCDIVITT, an Air Force lieutenant colonel, was born in Chicago, Ill., on June 10, 1929. He entered the Air Force in 1951 and flew jet fighter missions in Korea. In 1959 he graduated first in his class from the University of Michigan. He was a test pilot and logged about 3,000 hours of flying before being selected for training as an astronaut in 1962. McDivitt married Patricia Haas; they have three children, Michael, Ann, and Patric.


UPI

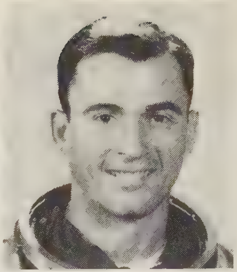
CHARLES CONRAD, JR., a Navy lieutenant commander, was born in Philadelphia, Pa., on June 2, 1930. After graduating from Princeton University in 1953, he entered the Navy, became a pilot, and worked as flight instructor, safety officer, test pilot, and pilot instructor. He logged 1,500 hours in jet planes before being selected for astronaut training in 1962. Conrad married Jane DuBose; they have four sons—Peter, Thomas, Andrew, and Christopher.

UPI

WALTER MARTY SCHIRRA, JR., a Navy captain, was born in Hackensack, N.J., on March 12, 1923. After graduating from the U.S. Naval Academy in 1945, he took flight training, and then flew 90 combat missions in Korea. He was a test pilot before being selected for training as an astronaut in April 1959. On Oct. 3, 1962, he made a six-orbit flight in *Sigma 7*. Schirra married Josephine C. Fraser; they have two children, Walter III, and Suzanne.

PICTORIAL PARADE

FRANK BORMAN, an Air Force colonel, was born in Gary, Ind., on March 14, 1928. After graduating from the U.S. Military Academy in 1950, he took pilot training and served with fighter squadrons for five years. He earned a master's degree and became an instructor at West Point. He was an instructor at a pilot's school before being selected as an astronaut in 1962. Borman married Susan Bugbee; they have two sons, Frederick and Edwin.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JOHN WATTS YOUNG, a Navy lieutenant commander, was born in San Francisco, Calif., on Sept. 24, 1930. A graduate of the Georgia Institute of Technology (1952), he entered the Navy (1952) and logged more than 3,000 hours of flying. He served as test pilot for the F-4H jet fighter, and set new records with this plane. He was selected for training as an astronaut in 1962. Young married Barbara V. White; they have two children, Sandra and John.

UPI

EDWARD HIGGINS WHITE II, an Air Force lieutenant colonel, took a "walk" in space from Gemini 4 on June 3, 1965. White was born in San Antonio, Texas, on Nov. 14, 1930. A graduate of the U.S. Military Academy (1952), he joined the Air Force, flew fighters, and earned a master's degree in 1959. After being a test pilot, he was selected as an astronaut in 1962. White married Patricia Finegan; they have two children, Edward and Bonnie Lynn.

NASA

LEROY GORDON COOPER, JR., an Air Force lieutenant colonel, was born in Shawnee, Okla., on March 6, 1927. After Marine Corps service (1945–46), he attended the University of Hawaii, entered the Air Force, and then flew for four years. He earned an engineering degree (1956), went to flight test school, was selected as an astronaut (1959), and made a 22-orbit flight (1963). Cooper married Trudy Olsen; their children are Camala and Janita.

NASA

THOMAS PATTEN STAFFORD, an Air Force lieutenant colonel, was born in Weatherford, Okla., on Sept. 17, 1930. After graduating from the U.S. Naval Academy in 1952, he transferred to the Air Force and became a pilot. He was a test pilot, an author of Air Force manuals, and an aviation school administrator before being selected for training as an astronaut in 1962. Stafford married Faye L. Shoemaker; they have two daughters, Diane and Karin.

UPI

JAMES ARTHUR LOVELL, JR., a Navy captain, was born in Cleveland, Ohio, on March 25, 1928. After graduating from the U.S. Naval Academy in 1952, he took flight training and served for three years as test pilot. He completed aviation safety courses, was a flight instructor and safety officer, and was selected to be an astronaut in 1962. Lovell married Marilyn L. Gerlach; they have four children—Barbara, James, Susan, and Jeffrey.

RUSSIAN COSMONAUTS

CENTRAL PRESS

PAVEL IVANOVICH BELYAYEV, a Soviet air force colonel, was born in Chelischevo, USSR, on June 26, 1925. He had ten years of schooling and worked in a war plant. After training to be a pilot in 1943, he flew with an air squadron in the Far East, 1945–56. He went to the Soviet Air Force Academy in Moscow in 1956, graduated in 1959, and was selected to be an astronaut. Belyayev and his wife, Tatiana, have two daughters, Irina and Ludmila.

CENTRAL PRESS

ALEKSEI ARCHIPOVICH LEONOV, a lieutenant colonel in the Soviet air force, left Voskhod 2 and "walked" in space on March 18, 1965. Leonov was born in Listvyanka, Siberia, on May 30, 1934. After ten years of school, he went to aviation school for four years and graduated in 1957. He was a fighter pilot and an expert parachutist before being selected for training as an astronaut in 1959. Leonov and his wife, Svetlana, have a daughter, Viktoria.

SOVFOTO

PIX

SOVIET COSMONAUTS Belyayev and Leonov (*above*, in capsule) made history during flight in March when Leonov left the Voskhod 2 for man's first "walk" in space (*right*).

Observations from Space. Throughout the flight, Cooper and Conrad were kept busy with tasks involving observations and measurements. Considerable attention was given to an attempt to evaluate the visual ability of the human eye in space. Human vision in space has been of interest since the first Mercury was in orbit. Astronauts have reported observing objects on the surface of the earth that were believed to be too small to be seen. For the Gemini 5 flight, an effort was made to resolve the problem. Patterns of 400- by 100-foot rectangles were laid out on the plains of Texas for identification. Although Cooper spotted the patterns, questions about man's visual acuity in space are still being investigated.

Photographs taken from Gemini spacecraft have provided wide-area coverage, good definition, good perspective, and repeated observations of the same area during successive orbits. Photographs taken from Gemini already have been of unexpected value in geology. For example, a hitherto unrecognized field of volcanoes was found in northern Mexico. In meteorology, cloud photographs obtained from Gemini spacecraft have revealed details not visible in pictures from Tiros satellites.

Gemini 6 and Gemini 7. The United States established new records and achieved important steps in preparing for a flight to the moon when the Gemini 6 and 7 spacecraft accomplished rendezvous and endurance missions in December 1965. Gemini 6, launched into a nearly perfect orbit on December 15, rendezvoused with Gemini 7 and then returned to earth after a flight of 25 hours, 51 minutes. Earlier, Gemini 6 had remained grounded during two unsuccessful mission starts. Gemini 7, launched on December 4, established a record for manned space flight. The 206-orbit flight lasted 330 hours 35 minutes and covered a distance of 5,903,000 statute miles (5,129,400 nautical miles).

On December 15, Walter M. Schirra, Jr., and Thomas P. Stafford flew Gemini 6 through a series of orbital changes that increased its altitude, decreased its speed, and closed the gap between Gemini 6 and Gemini 7. At the time, Gemini 7, with astronauts Frank Borman and James A. Lovell, Jr., was maintaining a circular orbit at an altitude of 184 miles. Gemini 6, after a brief series of maneuvers begun in its fourth orbit, flew in the same orbit as Gemini 7. The two spacecraft flew nose to nose at a distance of 10 feet or less—perhaps as little as 1

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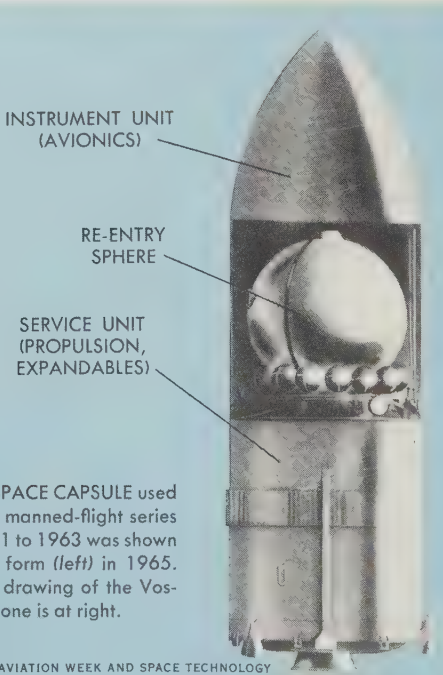
INSTRUMENT UNIT (AVIONICS)
RE-ENTRY SPHERE
SERVICE UNIT (PROPULSION, EXPANDABLES)

SOVIET SPACE CAPSULE used in Vostok manned-flight series from 1961 to 1963 was shown in model form *(left)* in 1965. Cutaway drawing of the Vostok nosecone is at right.

AVIATION WEEK AND SPACE TECHNOLOGY

SUCCESSFUL NONMILITARY EARTH SATELLITES AND SPACE PROBES, 1965

Name	Launch site and date[1]	Launch vehicle[2]	Spacecraft weight at lift-off (pounds)	Perigee and apogee (miles)	Initial period (minutes)	Inclination of orbit (degrees)	Dimensions	Remarks
Cosmos 52	T, Jan. 11	N.A.*	N.A.	127-189	89.5	65.0	N.A.	Scientific studies[2a]
Tiros 9	K, Jan. 22	T-D	305	436-1,602	119	83.3	42″ dia.; 22″ high	Cloud cover
Cosmos 53	Y, Jan. 30	N.A.	N.A.	141-741	98.7	48.8	N.A.	Scientific studies
OSO 2	K, Feb. 3	T-D	545	343-393	95	33	44″ dia.; 37″ high	Solar observatory
Pegasus 1	K, Feb. 16	Sn 1	3,200	308-462	97	31.7	96′ long; 14′ wide	Puncture hazards[3]
Ranger 8	K, Feb 17	A-A	800	Trajectory to moon	. . .	. . .	5′ dia.; 8¼′ high	Lunar impact on Feb. 20
Cosmos 54	U, Feb. 21	U	N.A.	173-1,151	106.2	56.1	N.A.	Scientific studies
Cosmos 55	U, Feb. 21	U	N.A.	173-1,151	106.2	56.1	N.A.	Launched with Cosmos 54
Cosmos 56	U, Feb. 21	U	N.A.	173-1,151	106.2	56.1	N.A.	Launched with Cosmos 54
Cosmos 57	T, Feb. 22	U	N.A.	109-317	91.1	64.8	N.A.	Scientific studies[4]
Cosmos 58	T, Feb. 24	U	N.A.	360-409	96.8	65	N.A.	Scientific studies
Cosmos 59	T, Mar. 7	U	N.A.	130-211	89.7	65	N.A.	Scientific studies[5]
Cosmos 60	T, Mar. 12	U	N.A.	125-178	89.1	64.8	N.A.	Scientific studies[6]
Cosmos 61	T, Mar. 15	U	N.A.	169-1,139	106	56	N.A.	Scientific studies[7]
Cosmos 62	T, Mar. 15	U	N.A.	169-1,139	106	56	N.A.	Launched with Cosmos 61
Cosmos 63	T, Mar. 15	U	N.A.	169-1,139	106	56	N.A.	Launched with Cosmos 61
Voskhod 2	B, Mar. 18	U	N.A.	108-309	91	65	N.A.	Two-man space flight[8]
Ranger 9	K, Mar. 21	A-A	800	Trajectory to moon	. . .	. . .	5′ dia.; 8¼′ high	Lunar impact on Mar. 24
Gemini 3	K, Mar. 23	Tn 2	7,110	100-139	88.2	32.5	10′ dia.; 18½′ long	Two-man space flight[9]
Cosmos 64	T, Mar. 25	U	N.A.	127-167	89.2	65	N.A.	Scientific studies[10]
Early Bird	K, Apr. 6	T-D	85	21,700-22,700	1,436	359.9	28″ dia.; 23″ high	Communications[11]
Cosmos 65	B, Apr. 17	U	N.A.	128-200	89.8	65	N.A.	Scientific studies[12]
Molniya 1	U, Apr. 23	U	2,000	309-24,470	708	65	N.A.	Communications[13]
Explorer 27	W, Apr. 29	S	132	584-819	107.8	41.2	18″ dia.; 12″ high	Gravitation; ionosphere
Cosmos 66	U, May 7	U	N.A.	122-180	89.3	65.0	N.A.	Scientific studies[14]
Luna 5	T, May 9	U	3,254	Trajectory to moon	. . .	. . .	N.A.	Lunar impact on May 12
Pegasus 2	K, May 25	Sn 1	3,200	314-466	97.3	31.8	96′ long; 14′ wide	Puncture hazards[3]
Cosmos 67	T, May 25	U	N.A.	128-217	90.1	51.8	N.A.	Scientific studies[14a]
Explorer 28	K, May 29	T-D	130	120-164,000	8,558	33.9	28″ dia.; 8″ high	Energetic radiations
Gemini 4	K, June 3	Tn 2	7,862	103-180	94	32	10′ high; 18½′ long	Two-man space flight[15]
Luna 6	T, June 8	U	3,238	Trajectory to moon	. . .	. . .	N.A.	Missed by 100,000 miles
Cosmos 68	U, June 15	U	N.A.	139-207	89.7	65	N.A.	Scientific studies[16]
Cosmos 69	U, June 25	U	N.A.	131-201	89.7	64.9	N.A.	Scientific studies[17]
Tiros 10	K, July 1	T-D	280	463-520	100.7	98.6	42″ dia.; 22″ high	Cloud cover
Cosmos 70	T, July 2	U	N.A.	229-717	98.3	48.8	N.A.	Scientific studies
Proton 1	U, July 16	U	26,880	114-375	92.2	63.5	N.A.	Cosmic rays[17a]
Cosmos 71	U, July 16	U	N.A.	324-337	95.3	56.0	N.A.	Scientific studies
Cosmos 72	U, July 16	U	N.A.	334-365	95.9	56.1	N.A.	Launched with Cosmos 61
Cosmos 73	U, July 16	U	N.A.	330-350	95.6	56.1	N.A.	Launched with Cosmos 61
Cosmos 74	U, July 16	U	N.A.	334-384	96.2	56.0	N.A.	Launched with Cosmos 61
Cosmos 75	U, July 16	U	N.A.	335-400	96.5	56.0	N.A.	Launched with Cosmos 61
Zond 3	U, July 18	U	N.A.	In heliocentric orbit	. . .	. . .	N.A.	Passed rear of moon
Cosmos 76	U, July 23	U	N.A.	162-261	92.2	48.8	N.A.	Scientific studies
Pegasus 3	K, July 30	Sn 1	3,200	320-332	95.2	28.9	96′ long; 14′ wide	Puncture hazards[3]
Cosmos 77	U, Aug. 3	U	N.A.	114-187	89.3	51.8	N.A.	Scientific studies[18]
Surveyor**	K, Aug. 11	A-C	2,100	102-510,861	(31 days)	28.6	44″ dia.; 94″ long	Test frame
Cosmos 78	U, Aug. 14	U	N.A.	130-204	89.8	60	N.A.	Scientific studies[19]
Gemini 5	K, Aug. 21	Tn 2	7,000	100-215	89.6	32.6	10′ dia.; 18½′ long	Two-man space flight[20]
Cosmos 79	U, Aug. 25	U	N.A.	130-220	89.7	64.9	N.A.	Scientific studies[21]
Cosmos 80	U, Sept. 3	U	N.A.	842-964	115.0	56.0	N.A.	Scientific studies
Cosmos 81	U, Sept. 3	U	N.A.	860-967	115.3	56.1	N.A.	Launched with Cosmos 80
Cosmos 82	U, Sept. 3	U	N.A.	876-970	115.7	56.0	N.A.	Launched with Cosmos 80
Cosmos 83	U, Sept. 3	U	N.A.	893-974	116.1	56.0	N.A.	Launched with Cosmos 80
Cosmos 84	U, Sept. 3	U	N.A.	910-979	116.4	56.0	N.A.	Launched with Cosmos 80
Cosmos 85	U, Sept. 9	U	N.A.	126-179	89.4	64.7	N.A.	Scientific studies[22]
Cosmos 86	T, Sept. 18	U	N.A.	793-1,018	115.1	56.0	N.A.	Scientific studies
Cosmos 87	T, Sept. 18	U	N.A.	810-1,025	115.5	56.1	N.A.	Launched with Cosmos 86
Cosmos 88	T, Sept. 18	U	N.A.	823-1,031	115.8	56.1	N.A.	Launched with Cosmos 86
Cosmos 89	T, Sept. 18	U	N.A.	840-1,039	116.3	56.0	N.A.	Launched with Cosmos 86
Cosmos 90	T, Sept. 18	U	N.A.	853-1,048	116.7	56.0	N.A.	Launched with Cosmos 86
Cosmos 91	B, Sept. 23	U	N.A.	131-212	89.8	65.0	N.A.	Scientific studies[23]
Luna 7	T, Oct. 4	U	3,318	Trajectory to moon	. . .	. . .	N.A.	Lunar impact on Oct. 7
OGO 2	P, Oct. 14	T-A	1,150	257-938	104.4	87.4	3′ square; 6′ long	Geophysical observatory
Molniya 2	B, Oct. 14	U	N.A.	310-24,885	719	65.9	N.A.	Communications
Cosmos 92	B, Oct. 16	U	N.A.	132-219	89.9	65.0	N.A.	Scientific studies[24]
Cosmos 93	T, Oct. 19	U	N.A.	137-324	91.7	48.1	N.A.	Scientific studies
Cosmos 94	B, Oct. 28	U	N.A.	131-182	89.3	65.0	N.A.	Scientific studies[25]
Proton 2	U, Nov. 2	U	24,400	119-396	92.6	63.5	N.A.	Cosmic rays
Cosmos 95	T, Nov. 4	U	N.A.	129-324	91.7	48.4	N.A.	Scientific studies[26]
Explorer 29	K, Nov. 6	D	385	692-1,414	120.3	59.4	48″ dia.; 32″ high	Geodetic satellite
Venus 2	U, Nov. 12	U	2,123	Heliocentric orbit	. . .	. . .	N.A.	Towards Venus
Venus 3	U, Nov. 16	U	2,123	Heliocentric orbit	. . .	. . .	N.A.	Towards Venus
Explorer 30	W, Nov. 19	S	430	440-548	103	59.7	24″ dia.; 27.5″ high	Solar radiation
Cosmos 96	U, Nov. 23	U	N.A.	140-192	89.7	51.9	N.A.	Scientific studies[26a]
Cosmos 97	U, Nov. 26	U	N.A.	137-1,309	108.3	49	N.A.	Scientific studies
Cosmos 98	U, Nov. 27	U	N.A.	128-340	92	65	N.A.	Scientific studies[26b]
A-1	H, Nov. 26	Di	88	328-1,098	108.2	34.6	18½″ dia.; 11″ high	First French launch[27]
Alouette 2	W, Nov. 27	T-A	320	315-1,862	121.4	79.8	42″ dia.; 34″ high	Topside sounder
Explorer 31	W, Nov. 27	T-A	215	315-1,856	121.3	79.8	30″ dia.; 25″ high	Ionosphere studies
Luna 8	U, Dec. 3	U	3,421	Trajectory to moon	. . .	. . .	N.A.	Lunar impact on Dec. 6
Gemini 7	K, Dec. 4	Tn 2	7,000	100-205	90	32	10′ high; 18½′ long	Two-man space flight[28]
FR-1	P, Dec. 6	S	135	462-480	100	75.6	27″ dia.; 33″ high	Ionosphere studies[29]
Gemini 6	K, Dec. 15	Tn 2	7,000	100-161	90	32	10′ high; 18½′ long	Two-man space flight[30]
Pioneer 6	K, Dec. 16	D	140	Heliocentric orbit	. . .	. . .	37″ dia.; 35″ high	Measurements in space
Cosmos 99	B, Dec. 10	U	N.A.	123-199	89.6	65	N.A.	Scientific studies[31]
Cosmos 100	B, Dec. 17	U	N.A.	393-413	97.7	65	N.A.	Scientific studies
Cosmos 101	B, Dec. 21	U	N.A.	161-341	92.4	49	N.A.	Scientific studies
Cosmos 102	U, Dec. 27	U	N.A.	127-157	89.2	56.1	N.A.	Scientific studies
Cosmos 103	U, Dec. 28	U	N.A.	366-397	97	56.1	N.A.	Scientific studies

[1] Code for launch sites: K—Cape Kennedy, Fla.; P—Point Arguello, Calif.; W—Wallops Island, Va.; B—Baikonur, USSR; Y—Kapustin Yar, USSR; T—Tyuratam, USSR; U—unknown site, USSR; H—Hammaguir, Algeria. [2] Launch vehicles: A-A, Atlas-Agena; S, Scout; T-A, Thor-Agena; T-D, Thor-Delta; A-C, Atlas-Centaur; Sn 1, Saturn I; Tn 2, Titan 2; Di, Diamant. [2a] Decayed Jan. 19. [3] Weight and dimensions apply to wings only. [4] Broke into more than 150 pieces. [5] Decayed March 15 (no longer in orbit). [6] Decayed March 17. [7] Broke into 26 pieces. [8] In orbit 26 hours. [9] Three orbits. [10] Decayed April 2. [11] Orbital elements refer to synchronous orbit. [12] Decayed April 25. [13] Apogee over USSR; weight is approximate. [14] Decayed May 15. [14a] Decayed June 2. [15] Four days in orbit. [16] Decayed June 23. [17] Decayed July 3. [17a] Decayed Oct. 11. [18] Decayed Aug. 11. [19] Decayed Aug. 22. [20] In orbit eight days. [21] Decayed Sept. 2. [22] Decayed Sept. 17. [23] Decayed Oct. 1. [24] Decayed Oct. 24. [25] Decayed Nov. 5. [26] Broke into pieces on Nov. 7. [26a] Decayed Dec. 9, 1965. [26b] Decayed Dec. 5, 1965. [27] Test satellite; communications ceased after two days. [28] Returned to earth on Dec. 18, 1965. [29] French and American cooperative launch. [30] Returned to earth on Dec. 16, 1965. [31] Decayed Dec. 18.

* Not available. **Surveyor Dynamic Model.

foot—and they could have made contact. A fly-around maneuver was performed almost immediately after the close nose-to-nose position was established. In this maneuver, Gemini 6 circled Gemini 7 at distances of from 40 to 60 feet. The two spacecraft then flew in formation for nearly four hours at distances varying from 20 to 100 feet. Gemini 6 finally broke away from rendezvous, and on December 16 splashed down in the Atlantic Ocean 700 miles from Bermuda and within 15 miles of the carrier *Wasp*.

Borman and Lovell continued their long endurance flight in Gemini 7. They alleviated minor body discomforts by taking off their space suits and wearing only underwear part of the time. The men and equipment held up well during the 14-day flight, and most of the planned experiments were conducted successfully. On December 18, Gemini 7 splashed down within 15 miles of the *Wasp*, once again showing improved landing accuracy. The two-week flight of Gemini 7 proved that man can endure travel in space without injury.

Soviet Manned Spacecraft. The only manned space flight made by the USSR in 1965 was a spectacular flight by Voskhod 2. (Voskhod 1, launched on Oct. 12, 1964, carried three men into orbit.) Voskhod 2, launched on March 18, 1965, carried Col. Pavel I. Belyayev and Lt. Col. Aleksei A. Leonov on a 17-orbit journey that lasted 26 hours. The crew reportedly rode in orbit in a pressurized cabin and did not wear pressurized suits.

At the beginning of the second orbit, Leonov emerged from the spaceship and became the first man to move about in space outside of a spacecraft. He wore a pressurized space suit with an autonomous life-support system that included a power supply, an oxygen supply, and an air-conditioning unit. A cord between Leonov and the spaceship permitted him to move about freely to a distance of 16.4 feet from Voskhod 2. His excursion into space lasted for 20 minutes, but for only 10 minutes was he completely outside Voskhod 2 and moving freely. The other 10 minutes were used to make his departure.

Voskhod 2, unlike Gemini 5, was not depressurized for the walk in space. An air lock was built into the craft, and Leonov made his exit through it and its two hatches. Belyayev, who remained inside, was not exposed to the vacuum of space.

In space, Leonov carried no propulsion devices to aid his movements. He relied on his reaction to his own movement when he tugged on the lifeline or touched the spacecraft. His experiments with motion in gravity-free space—tumbling, somersaulting, and drifting—were photographed by a camera and transmitted to the ground. These pictures were shown on Soviet television during the flight.

EARTH SATELLITES AND SPACE PROBES

In 1965, unmanned space vehicles of the United States achieved spectacular successes, including the detailed photographing of the planet Mars and the moon. The world's first commercial communications satellite was placed in orbit, and advanced scientific satellites provided a variety of data on conditions near the earth and in interplanetary space. The Department of Defense launched about 50 satellites, including Sentry and Snapshot vehicles.

During the year the Soviet Union successfully launched 52 Cosmos satellites, as well as lunar probes, deep-space probes, communications satellites, and a new type of heavy spacecraft.

Mariner 4. The most spectacular space exploration by an unmanned spacecraft in 1965 was achieved by the U.S. vehicle Mariner 4, which flew past Mars, took 21 pictures of its surface, and successfully transmitted them to the earth.

Mariner 4, launched on Nov. 28, 1964, was guided by means of sightings on the stars, with its sights fixed on the sun and the bright star Canopus. For 228 days before taking its historic photographs of Mars, the craft traversed space, overcame hazards, and maintained contact with the earth. Mariner 4 set new records for a useful spacecraft trajectory

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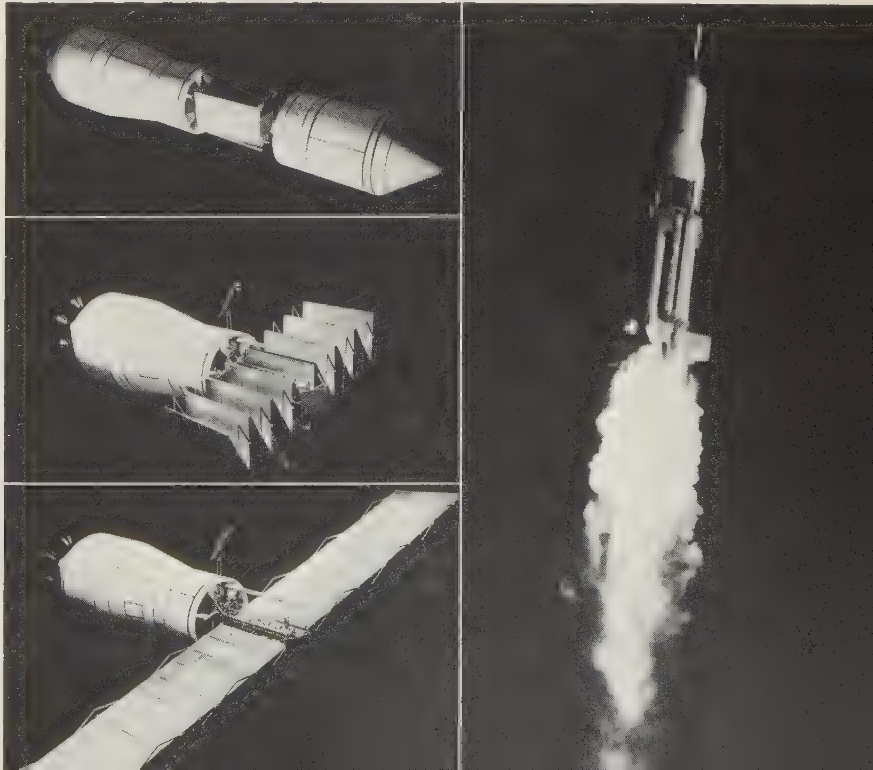


PEGASUS 1 SATELLITE (*left*) extended 48-foot wings when it was placed in orbit by Saturn 1 launch vehicle (*right*) on February 16. Pegasus recorded hits by micrometeorites against aluminum sheets on its wing panels, thus furnishing data on hazards to spacecraft from cosmic debris.

away from the earth and for distance of human communication—134 million miles from earth when it passed Mars and about 191 million miles when communications ended by command on Oct. 1, 1965.

Mariner 4 performed two missions. First, it secured better information about the planet Mars, and second, it investigated interplanetary space. For space investigations, it carried six experiment packages to detect and measure solar wind, cosmic rays, radiation trapped in the earth's magnetosphere, dust particles and micrometeorites, and magnetic fields. The cosmic-ray detector was the only one that failed during the journey. Two additional experiments were designed only for study of Mars. One used a single television camera that was limited to taking pictures of only 200 lines to the frame. The other used the spacecraft transmitter to obtain information on Mars' atmosphere.

When Mariner 4 neared Mars on July 14, the camera began taking pictures from a distance of 10,500 miles; the closest approach was 6,118 miles. During the 25-minute encounter, the camera took 21 pictures. The path of photography began at the limb (edge) of the planet, crossed the equator, and ended at the terminator line (the dividing line between the day side and the night side). The 4,000-mile track curved slightly but did not enter a polar region. Each frame covered an area of the Martian surface that was about 150 miles square. The pictures, which showed objects three miles across, had a resolution that was about 30 times better than that obtained with the best ground-based telescope.

The results of the photography were stored until the spacecraft had passed beyond the planet, and then were transmitted to earth. Travel time of a signal to earth was 12 minutes, and the time needed to transmit a single photographic frame was about eight hours. The complete photographic data were transmitted between July 15 and July 24.

The results of the Mariner 4 flight provided important information about Mars and space beyond the orbit of the earth. The strip of Mars that was photographed—about 1% of the planet's surface—is covered with craters similar to those on the moon. No clearly defined canals were observed. The transmission experiment showed that the Martian atmosphere is very thin and has a pressure of 10 to 20 millibars or less, about equal to that in the earth's atmosphere at an altitude of 20 miles. An ionosphere exists on the sunward side of Mars at an altitude of 100 miles. Other measurements showed that the equatorial radius is 10 to 20 miles greater than the value determined from the earth, and the mass of the planet is somewhat less than the expected value. No Van Allen radiation belt was observed, and no concentration of micrometeorites in the space about Mars was found. The magnetic field of the planet, if any, was too small to be measured by Mariner 4. The data provided by Mariner 4 indicate that Mars is not similar to the earth, but is very much like the moon. (See also ASTRONOMY.)

Mariner 4's successor, Voyager, will be able to place instruments on the surface of Mars.

Ranger Moon Probes. Ranger 8 and Ranger 9 crashed on the moon in 1965 and completed the successful lunar photography program begun with Ranger 7 in 1964. All three spacecraft had the identical mission of photographing limited areas of the lunar surface while in flight close to the moon. Each Ranger carried six cameras to photograph the surface and a telemetry system to transmit the pictures while they were being taken.

Ranger 7 landed in the Sea of Clouds on July 31, 1964, after transmitting 4,308 pictures. Ranger 8, launched on Feb. 17, 1965, landed in the Sea of Tranquillity on February 20 after taking 7,137 pictures in 23 minutes. The impact trajectory of Ranger 8 was less steep than the trajectory of Ranger 7, and allowed Ranger 8 more time to take a greater number of pictures. The target area for Ranger 8 was closer to the terminator line, and the Ranger 8 pictures therefore showed longer shadows cast by the lunar terrain. (Shadow length indicates elevation.) Ranger 8 pictures were taken from altitudes of 1,553 miles to 1,700 feet.

Ranger 9, launched on March 21, 1965, landed in the crater of Alphonsus on March 24. The trajectory of Ranger 9 was so accurate that the spacecraft was only a few miles off its target point. A sequence of 5,814 pictures was taken in 18 minutes 47 seconds, at altitudes from 1,300 miles to about 4,000 feet, before Ranger 9 landed 180 miles from the terminator line in a region selected for roughness of terrain. (See also ASTRONOMY.)

A total of 17,259 pictures of a very small part of the lunar surface was obtained from the three Ranger flights. The best resolution was 2,000 times better than the best resolution obtained by telescopes on earth. The pictures show that craters are the dominant feature of the lunar surface. The surface shows a surprising smoothness, and most structures have an unexpected roundness of detail.

Collectively, the pictures have not given conclusive evidence that it is safe for a manned spacecraft to land on the moon. Consequently, the Surveyor and Lunar Orbiter series of spacecraft will follow the Ranger program. Surveyor missions will place instruments on the lunar surface for investigations. Lunar Orbiter will make extensive observations of the lunar surface while orbiting the moon.

Orbiting Solar Observatory. The second Orbiting Solar Observatory, OSO 2, was launched on Feb. 3, 1965. (OSO 1 had been put into orbit on March 7, 1962.) OSO 2 consists of two parts: a nine-sided box, 9 inches high and 44 inches across, that rotates at 30 rpm. to stabilize the orientation of the satellite; and a rough semicircle, called the sail, with a diameter of 44 inches that could be oriented toward the sun with an accuracy of one minute of arc. The sail carried solar cells to provide power.

OSO 2 carried eight experiment packages to study solar phenomena and their influence on the interplanetary and terrestrial environment. Three packages on the sail pointed steadily at the sun. They included an ultraviolet spectrometer and spectroheliograph, a monitor for bursts of solar X-rays, and a coronagraph. The five packages on the spinning box functioned well. They included equipment to study polarized zodiacal light, gamma rays, and cosmic rays; two ultraviolet spectrophotometers; and specimens to determine the radiative stability of surface coatings. Communications with OSO 2 were terminated on Nov. 29, 1965.

Orbiting Geophysical Observatory. OGO 2 was successfully orbited on Oct. 14, 1965, but excessive amounts of jet gas were required to maintain stability while in orbit. The power supply was practically depleted, and by October 27 the satellite was tumbling. OGO 1, which was launched on Sept. 4, 1964, had failed to stabilize as planned, but it maintained sufficient stability so that most of its experiments worked successfully.

OGO 2, like OGO 1, is basically a box 3 feet square by 6 feet long that houses most of the experiment packages and equipment. OGO 2 deploys booms to hold antennas and magnetometers away from disturbances in the spacecraft body. Side panels carry the solar cells that generate the power. A short boom carries experiment packages that face the direction of motion. The stabilization system is designed to rotate the body and the solar cell panels so that the solar cells view the sun steadily.

The power available for the 20 experiment packages on OGO 2 varies because OGO 2 tumbles. When sufficient power is available, equipment is turned on to make measurements of the geomagnetic field and the earth's upper atmosphere.

Explorer. Six Explorer satellites were launched in 1965. Explorer 27 was put into orbit on April 29 to acquire information on irregularities in the earth's gravitational field and to investigate the electron count below the altitude of the satellite. Explorer 28 was launched on May 29 to investigate the environment of space beyond the earth's magnetosphere and the Van Allen radiation belts. Its orbit reaches to a distance of 164,000 miles from earth. Explorer 29, launched on Nov. 6, 1965, carries five systems of instrumentation to obtain improved reference data for geodetic surveying. Foreign countries are cooperating in making the needed observations of Explorer 29. Explorer 30 was launched on Nov. 19, 1965, to advance the solar studies of scientists at the Naval Research Laboratory. Explorer 31 and Alouette 2, launched by a single rocket on November 27, are making studies of the ionosphere of the earth, particularly in the polar regions. Alouette 2 is the second Canadian-built satellite.

Pioneer. Pioneer 6, launched into a heliocentric orbit on Dec. 16, 1965, marks a return to the use of small spacecraft to make measurements in interplanetary space. Pioneer 5 was launched on March 11, 1960.

Tiros. The National Aeronautics and Space Administration (NASA) launched the Tiros 9 satellite on January 22 to obtain more photographs of the cloud cover of the earth. In shape, the Tiros satellites resemble a hat box. Tiros 9 rolls like a wheel in its orbit and uses two cameras to photograph the earth through the sides of the box. Tiros 9 was placed in a near-polar orbit that was selected to bring the satellite to the daylight side of the earth in each revolution. This was the first time that NASA had put a satellite into a polar orbit from the launch site at Cape Kennedy, Fla.

Tiros 10 was launched by NASA on July 1. Like the earlier members of the Tiros group, it photographs the clouds through the bottom of the box. A magnetic attitude control is used to change the spin-axis direction so that the earth is retained in the field of view of the cameras throughout the orbit.

Tiros 10, the last of the experimental weather satellites, will be followed by six similar Tiros operational satellites that will be used by the U.S. Weather Bureau for worldwide weather forecasting services. (See also WEATHER.)

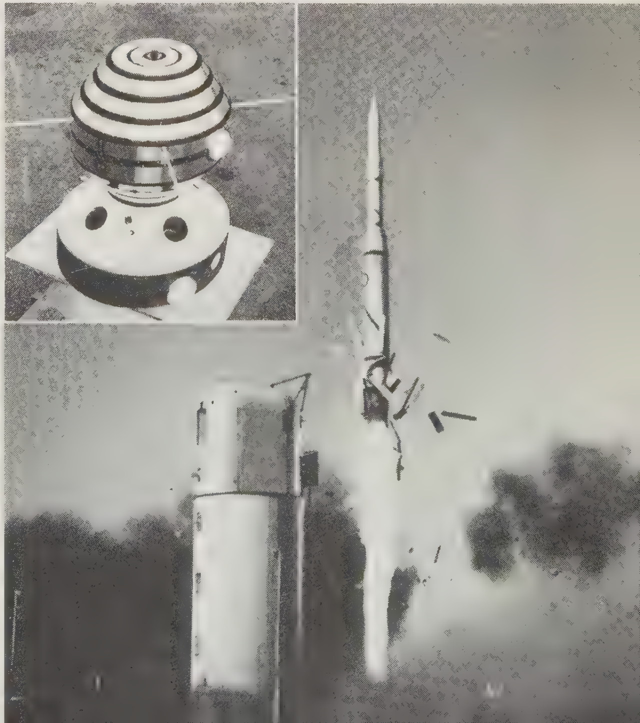
Early Bird. Early Bird, launched by NASA on April 6, is the world's first commercial satellite. It is used for transatlantic communications. Early Bird provides 240 two-way channels for telephone, telegraph, or television service. It has redundant equipment to ensure reliability. The satellite, which is similar to Syncom 3 in shape and function, was placed in a synchronous orbit at an altitude of 22,300 miles in a position over the equator at longitude 27.5° W.

For about six weeks Early Bird was subjected to a series of tests of various modes of transmission between Europe and America. One important objective of the tests was to determine the human reaction to the 0.6-second delay observed by a speaker before receiving an answer—a delay caused by the long route of transmission. Early Bird, owned by the Communications Satellite Corporation, was formally placed in commercial service on June 28. The service was inaugurated by a 25-minute call by President Johnson, who talked with Prime Minister Harold Wilson of Great Britain, West German Chancellor Ludwig Erhard, and other European leaders.

Pegasus. Three Pegasus satellites were put into orbit in 1965 by the Saturn 1 launch vehicle. Pegasus 1 was launched on February 16, Pegasus 2 on May 25, and Pegasus 3 on July 30. Their mission is to evaluate the danger of a puncture of a spacecraft by micrometeorites and dust in the vicinity of the earth. The Pegasus satellites extended two huge "wings," each 48 feet long by 14 feet wide, when orbit was achieved. The wings are covered on both sides with 208 panels that are protected by aluminum sheet. A micrometeorite is counted when it penetrates a sheet. Pegasus found that the danger of penetration of a spacecraft by particles in the vicinity of the earth is less than had first been estimated.

Oscar. The Oscar 3 satellite went into orbit on March 9, 1965. It was one of eight satellites put into orbit by a single Thor-Agena rocket. This is a record number of satellites simultaneously placed in orbit. Oscar 3 was designed by radio amateurs for their use as a communications satellite. Oscar 4 was placed in orbit on Dec. 21, 1965.

Snapshot. The 970-pound Snapshot, roughly conical in shape, was 12 feet long and 5 feet in diameter. It was put into orbit on April 3, 1965, to test the performance of the SNAP 10-A (systems nuclear auxiliary power) system under space conditions. This was the first known launch of a nuclear-fission



FRENCH SATELLITE A-1 (*inset*) was placed in orbit by Diamant rocket from test site in Algeria on November 26. France became the third nation to launch its own satellite.

UPI PICTORIAL PARADE

reactor into earth orbit. The fuel was uranium-235. Nuclear energy was converted into heat, which was converted into electrical energy by means of thermoelectric elements. The unit developed about 565 watts of electrical power within four hours after the nuclear reactor was activated by command. The unit ceased to function after 48 days in orbit.

Snapshot carried a number of experiments to make use of the electrical energy. One was a 2.2-pound ion engine that used vaporized cesium ions. The ions were accelerated to high speeds by an electrical field to generate a small thrust of 0.002 pound. In this case, operation of the ion engine was suspended because it interfered with other equipment. The ion engine is a possible source of thrust for extremely long-range spacecraft. (See also ATOMIC ENERGY.)

Sentry. Two 524-pound Sentry satellites, launched on July 20, 1965, were maneuvered into a circular orbit at an altitude of about 65,000 miles. The satellites, which were positioned diametrically opposite each other in the circular orbit, will make a limited survey of nuclear explosions in space. The great separation of the pair is used to protect the system from false alarms, such as might arise from solar flares or cosmic-ray showers. The satellites carry detectors for X-rays, gamma rays, neutrons, and nuclear-fission particles.

Soviet Cosmos Satellites. The Soviet Union launched 52 Cosmos satellites into orbit in 1965. They were always reported to be scientific satellites. On several occasions as many as five Cosmos satellites were put into orbit by a single launch vehicle. It was announced that nuclear-fission power sources were tested in satellites that were launched in clusters on September 3 and 18.

Molniya. Molniya 1, the first satellite identified as a communications satellite by the Soviet Union, was launched on April 23. It is in a highly elliptical orbit with an apogee of 24,828 miles and a perigee of 340 miles. It was moved to place the apogee over Siberia so that the satellite spends most of its time over the USSR. Molniya 2 was placed in a similar orbit on October 14. A press announcement stated that a communications system of satellites was being developed.

Luna. Four lunar probes—Luna 5, 6, 7, and 8—were launched by the Russians in 1965, but all failed to achieve their apparent mission of a soft landing to place instruments on the moon's surface. Luna 8, reported to weigh 3,421 pounds, started its journey from a parking orbit about the earth. The other Lunas were similar. Luna 5, launched on May 9, reportedly made a crash landing on the moon. Luna 6, launched on June 8, was reported to have missed the moon by 100,000 miles. Luna 7, launched on October 4, made an unsuccessful landing on the moon, as did Luna 8, launched on December 3.

Zond. The Soviet space probe Zond 2, launched on Nov. 30, 1964, on a course to Mars, was reported on May 5 to have ceased transmission. Zond 3, launched from a parking orbit on July 18, passed the far side of the moon on July 20 and photographed the surface at distances of 6,500 to 7,200 miles. The eight pictures that were published were greatly superior to those taken by Luna 3 on Oct. 7, 1959. Objects about six miles across can be resolved. It has been claimed that the photographs of Luna 3 and Zond 3 cover most of the lunar surface not visible from the earth.

Venus Probes. The Russians sent two spacecraft on a 3½-month journey toward the planet Venus. The 2,123-pound Venus 2 was launched from a parking orbit on Nov. 12, 1965. The 2,123-pound Venus 3 was launched on Nov. 16, 1965. The 1,418-pound Venus 1 had failed in flight in 1961.

Proton. The Russians launched Proton 1, the heaviest satellite ever to be put into orbit, on July 16, 1965. This new type of spacecraft weighs about 26,000 pounds. It carries a spectrometer for cosmic rays, a telescope for gamma rays, equipment for measuring the energy of cosmic particles, and instrumentation for high-energy electrons. Proton 2 was launched on Nov. 3, 1965.

French Satellites. France became the third nation to launch a satellite by its own means when it placed an 88-pound satellite in orbit with the French Diamant rocket and French launch facilities in Hammaguir, Algeria. The satellite, called A-1, was launched on Nov. 26, 1965. Britain, Canada, and Italy have had national satellites in orbit, but they were launched with American rockets.

The first French satellite to be launched jointly by France and the United States was placed in orbit from Vandenberg Air Force Base, Calif., on Dec. 6, 1965. The 135-pound scientific satellite, called FR-1, went into a nearly polar orbit.

HENRY E. STAUSS
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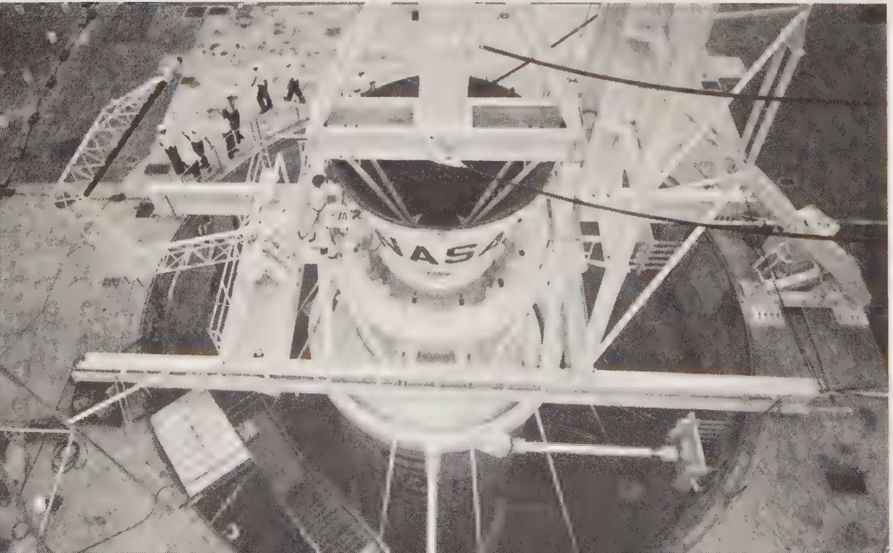
WIDE WORLD



MONSTER ROCKET, the world's largest solid-propellant type, was fired successfully Sept. 25 at Homestead, Fla., in a static (tie-down) test. Rocket attained a thrust of 3.5 million pounds.

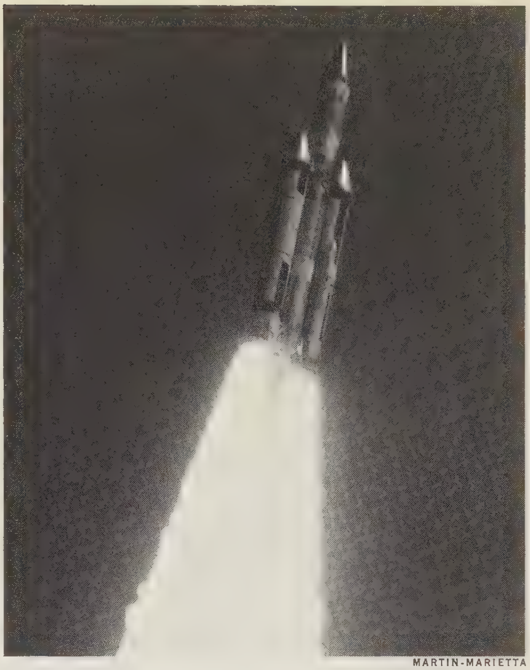
ASTRONAUTICS: SPACE SCIENCE AND TECHNOLOGY

Momentous events in the relatively short history of American space technology occurred in 1965. The United States took some giant steps forward in the development of launch vehicles, rocket propulsion systems, and ancillary spacecraft and hardware.

Monster Rocket. Perhaps the most portentous event related to the future of space operations occurred on September 25 when the Aerojet-General Corporation, in a static (tie-down) test, successfully fired a solid-propellant rocket that has a 260-inch diameter. The monster rocket, the largest unit of its kind in the world, represents a triumph of the U.S. chemical and rocket industry. A special steel case 260 inches in diameter and about 60 feet long (half the design length) had to be fabricated to withstand the pressure of 600 pounds per square inch that builds up during the burning process. New machinery for pouring and casting the propellant in its liquid state had to be devised, and the igniter system had to be designed and modified. A huge $20 million test facility had to be constructed south of Miami, Fla., in flat, muddy ground away from residential areas. After two years of effort, all of these goals were achieved in 1965.

In January 1965, NASA authorized the money for pouring and casting 1.8 million pounds of propellant. By early August the solid-propellant grain was cast in a cloverleaf form and cured (hardened) in place in the rocket case. The monster test booster rocket was ready for firing. The igniter for this solid-propellant rocket was a smaller rocket that exhausts its flame downward into the nozzle of the 260-inch-diameter rocket to fire the propellant surface. Ignition was achieved successfully, and the rocket attained a maximum thrust of 3.5 million pounds. The total firing time was 2 minutes 4 seconds.

This test was scheduled to be repeated in February 1966, and enough information should be available by mid-1966 to enable engineers to design a flyable booster that will have a much lighter steel case and an improved type of exhaust nozzle. If the technology for a 260-inch-diameter solid-propellant rocket can be improved so that flight hardware can be built, then a booster several times the size of Saturn 5 may become available during the early 1970's. This booster will be capable of launching a payload of 500,000 pounds.

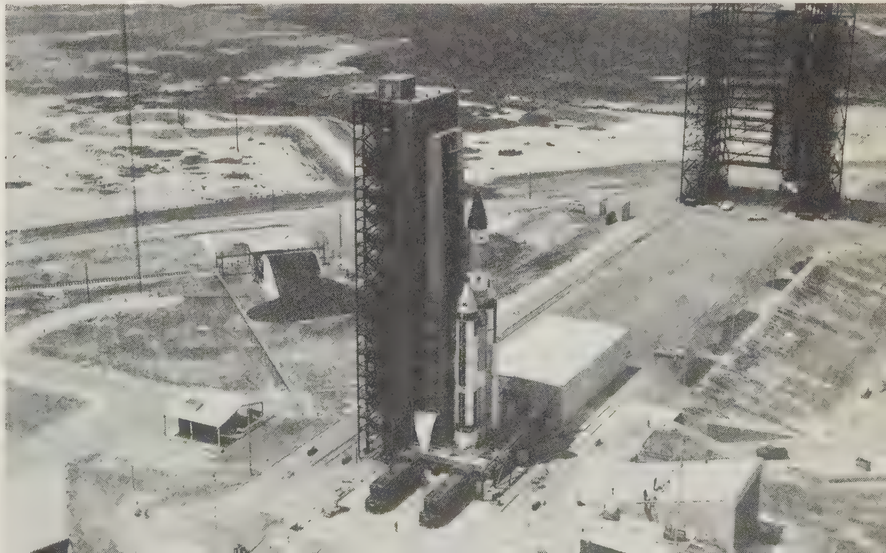

MARTIN-MARIETTA

TITAN 3 BOOSTER ROCKET, launched on June 3, placed a 21,000-lb test load in orbit 100 miles above the earth.

Titan 3. Another major breakthrough was achieved on June 18 when a Titan 3 booster rocket was launched successfully from Cape Kennedy. The Titan 3 rocket has three stages; the first and second stages are a Titan 2 rocket, and the third stage is called a transtage. Each of these stages has liquid-propellant engines. The Titan 3 rocket was boosted by two 92-foot-long, 120-inch-diameter solid-propellant rockets strapped to its sides. This was the first time that large solid-propellant rockets had been used to lift a huge rocket.

The Titan 3 was launched to a high altitude by the strapped-on rockets, and the critical separation of the solid-propellant rockets from Titan 3 was achieved. The three liquid-propellant stages of Titan 3 then fired successfully, and the transtage and a

MARTIN-MARIETTA



TITAN 3 rocket is shown being made ready for launching from Cape Kennedy, Fla. In 1966–67 the Titan 3 will launch experimental spacecraft as part of a program aimed at developing a manned orbiting laboratory.

21,000-pound test load were placed in orbit 100 miles above earth. A second Titan 3 was launched in a similar way on October 15. The solid-propellant rockets and the first and second stages of Titan 3 operated successfully, but the transtage broke apart in orbit, and the payload of two small satellites was lost.

The Titan 3 rocket will be used by the Air Force during 1966 and 1967 for launching experimental spacecraft as part of the development of a manned orbiting laboratory (MOL). The Titan 3 will be able to place a 26,000-pound payload into a 300-mile-high orbit across the equator. Later in this decade a somewhat smaller payload will be launched across the North Pole into a polar orbit. Another version of the Titan 3 to be developed will have longer and stronger fuel tanks than the present Titan 3, and longer strapped-on solid-propellant rockets.

The Titan 3, like the Titan 2 rocket, has an advantage over NASA's Saturn launch vehicles because its propellants can be kept for long periods in the launch vehicle tanks without boiling off or freezing, either of which can occur when liquid oxygen or liquid hydrogen propellants are used.

Saturn 1 Launch Vehicles. NASA continued to develop the Saturn 1 class launch vehicles. The two-stage Saturn 1 has eight engines in the first stage and six engines in the second stage. The first-stage engines provide 1.5 million pounds of thrust, and the second-stage engines, 90,000 pounds. Several Saturn 1 rockets were fired during 1964 and 1965, and the rocket has shown remarkable reliability and versatility. However, its weight-carrying capability is restricted by its relatively small second stage, which uses a cluster of six liquid-propellant RL-10 engines with a thrust of 15,000 pounds each. Consequently, a Saturn 1B rocket is being developed with a new second stage. This second stage has a J-2 liquid-hydrogen, liquid-oxygen engine that provides a thrust of 200,000 pounds. The first flight of the Saturn 1B is scheduled for 1966.

It appears that NASA will phase out the Saturn 1 class vehicles sooner than expected. The Saturn 5 rockets may be used for unmanned space missions, such as the planned flight of Voyager spacecraft toward Mars in 1971, as well as for manned space missions, such as the Apollo program. However, some further development of the smaller Saturn 1B will continue, and a number of Apollo test flights in earth orbit will be made by using the Saturn 1B rocket. The Apollo spacecraft, which includes the lunar excursion module, the service module, and the command module, will be launched into earth orbit by the Saturn 5 rocket. The spacecraft will then travel toward the moon.

Saturn 5. Production of the first-stage package of the Saturn 5 rocket began at NASA's Michaud plant near New Orleans, La., in 1965. The associated Mississippi Test Facility buildup also continued, and this facility will be ready to begin static tests of Saturn 5 engines in 1966. A five-engine complex of the first stage of this huge rocket underwent static tests at the Marshall Space Flight Center (MSFC) in Huntsville, Ala., at least seven times in 1965. The five F-1 engines, which provide a thrust of 7.5 million pounds, passed their tests successfully. The firing lasted for times that ranged from 6.5 seconds to a full-duration firing of 2½ minutes on August 5. The noise level of this firing is so high that MSFC has to take account of wind direction and velocity before a test firing is made so that the sound will not disturb nearby residents.

Successful tests were made of the J-2 liquid-propellant engine produced by the Rocketdyne Corporation. These tests led to qualification and flight readiness. The package for the second stage of the Saturn 5 rocket also was completed and satisfactorily checked; it will use five J-2 engines for propulsion. The third stage of Saturn 5, which has a single J-2 engine, also passed many of its early engineering tests.

The Saturn 5 rocket has passed its thorniest development phase; the first stage F-1 engines have fired successfully enough times to demonstrate flight capability, and initial problems of combustion and stability have been overcome. A test model of the Saturn 5 will be transported to Cape Kennedy in 1966. At Cape Kennedy the vertical assembly building, which will house the Saturn 5 during preliminary checkout and attachment of hardware, was completed. This building, one of the tallest and biggest structures in the world, is 716 feet long, 518 feet wide, and 526 feet high (52 stories). It can house four Saturn 5 rockets.

Considerable difficulties were encountered with the transportation vehicles that are to move the assembly tower and the Saturn-Apollo space vehicle from the building to the launch site. The tower is used during assembly, transport, and launch. Difficulties with the wheels and bearings of the transportation vehicles were cleared up, and the launch complex was almost ready in late 1965 to receive the first giant Saturn 5 rocket. A test flight of the Saturn 5 may be made late in 1966.

A launching of a test-model Apollo spacecraft was attempted from the White Sands Missile Range in New Mexico on May 19. The Apollo spacecraft model was launched by a Little Joe 2 solid-propellant rocket. However, the rocket malfunctioned, and the test was not successful. The purpose of the test was to evaluate the launch escape system of the Apollo spacecraft, which will be launched by the Saturn 5 rocket.

Centaur. NASA attempted to launch a Centaur vehicle on March 2 as part of a continuing series to develop this important Atlas-based launch vehicle. The launching was a failure, and it caused a critical reexamination of the entire Centaur program. The Congressional Science and Astronautics Committee, however, recommended continuation of the Centaur program, and another launching occurred on August 11. This firing, which was the first major success for the Centaur vehicle, gave the entire program a considerable boost. If later tests indicate that the Centaur, an upper-stage vehicle, is ready for operational tasks, then it will be used for some deep-space missions, including lunar Surveyor missions and possibly another Mariner launching to Venus. The Surveyor spacecraft, which will weigh 2,500 pounds, will make important preliminary unmanned explorations of the lunar surface before a manned landing is attempted.

Fluorine-Hydrogen Engine. The Pratt & Whitney Aviation Division of United Aircraft Corp. was given a contract to develop prototype fluorine-hydrogen rocket engines. The corporation previously had demonstrated the practicality of combining fluorine, a reactive gas, with hydrogen in a rocket propulsion chamber. One problem is to find a suitable application for such a high-energy rocket engine, which is at least 20% more efficient than an equivalent oxygen-hydrogen engine. Some thought has been given to using a fluorine-hydrogen engine for the lunar Surveyor program.

Nuclear-Electric Propulsion. On April 3, 1965, the Air Force launched and orbited a Snapshot spacecraft that carried a SNAP 10-A nuclear reactor to produce power for electrical circuits within the spacecraft. (SNAP stands for "systems nuclear auxiliary power.") The Snapshot spacecraft also had an ion electric engine to produce small amounts of thrust. When the spacecraft was in orbit, the nuclear reactor was started, and it successfully produced electric power. The ion engine also was started successfully, and it produced a 0.002-pound thrust. However, the ion engine was shut down by command after garbled telemetry data were received.

Further tests with ion engines are continuing at various U.S. facilities, including NASA's Lewis Research Center in Cleveland, Ohio. There are still two prime contenders for a practical ion propulsion system: the bombardment ion engine developed at the Lewis Research Center, and the contact ion engine developed by Electro-Optical Systems, Inc. The latter ion engine was used in connection with the Snapshot project.

Applications for ion engine systems will have to await the successful development of a SNAP system that will generate hundreds of thousands of kilowatts of electric power and will have a very low weight-to-power ratio. In 1965, NASA began a number of studies to evaluate nuclear-electric power requirements for future deep-space missions, including trips to the five planets beyond Mars.

Nuclear-Thermal Propulsion. The tempo of work to develop nuclear-thermal propulsion for space vehicles increased during 1965. Several successful full-duration firings were completed at the Atomic Energy Commission-NASA nuclear propulsion test facility at Jackass Flats, Nev. Severe materials and radiation difficulties had slowed down the project in 1964, but many of these difficulties were overcome during 1965. NASA hopes to produce more than one billion watts of thermal power in the NERVA (nuclear engines for rocket vehicle applications) reactor before the end of 1965. A firing time of several minutes has been achieved at a thrust level exceeding 100,000 pounds. Three more firings were made at thrust levels of 120,000 to 150,000 pounds, and a static firing in November was successful. However, the NERVA project faces at least three years of determined development effort to achieve the low weight (the shielding alone may require several tons of material) and reliability necessary for a flight-ready upper-stage rocket engine.

Improved Materials. The constant trend toward higher heat fluxes and temperatures in nuclear-propulsion reactors and the advent of high-energy chemical engines, including fluorine-hydrogen engines, indicate the need for improved materials. A steady research and development program is being conducted under the auspices of the Department of Defense and NASA to improve materials for new applications. Sizable strides have been made in developing boron fibers. These fibers are pressed or glued together with certain ceramics to provide a material that is lightweight, very strong, and capable of withstanding temperatures up to 5,000°F for extended periods without provisions for cooling the material. A considerable advance was made in 1965 in developing new rocket-engine liners and sheathing materials for high-temperature nuclear reactors.

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SPAIN

On several occasions in 1965 the Spanish government reiterated its policy of liberalizing political controls. The cabinet underwent its first major reorganization since February 1957, and although the purpose was to solve economic problems, the new cabinet did promise political reforms. However, the long-awaited press censorship bill fell short of eliminating government control, and the government discouraged efforts by university students to gain control of state-directed student unions.

Spain expanded its trade with Communist nations while maintaining a staunchly anti-Communist position. Trade with Britain, Spain's most important market, apparently was unaffected by the Spanish-British conflict over sovereignty of Gibraltar.

Government Reorganization. In the face of rising food prices and general inflation, Generalissimo Francisco Franco reshuffled his cabinet on July 7, 1965. Five ministers were shifted in the areas of economic policy, but the total number of ministers remained at 19, and the balance between political and economic factions was retained. New ministers were appointed to the departments of commerce, agriculture, finance, and public works. Laureano López Rodo, the former planning commissioner, replaced Pedro Gual Villalbi as minister without portfolio to coordinate government economic policies. In addition, a new minister of justice was named. The principal person dropped from the cabinet was Alberto Ullastres Calvo, the minister of commerce, who had played an important role in stabilizing the currency and liberalizing the economy.

A statement of government aims, released on July 9 after the first meeting of the new cabinet, promised Spaniards a more representative political system. It indicated that the government would "emphasize the representative character of the political order, to assure continuity in the future, completing and perfecting our fundamental laws cemented in the principles of the national movement." The statement also declared that public opinion would be considered in the framing of a new press law, and that agricultural marketing would be improved for the benefit of both the farmer and the consumer. Late in the year the government drafted a bill that eliminated direct censorship of the press, but left room for government control.

Student Protest. Students at the large Spanish universities achieved some success in their efforts to organize democratically elected student unions in opposition to the government-controlled student syndicate. On February 24, 4,000 students clashed with policemen at the University City campus of the University of Madrid. The students, led by four professors, had begun a protest march to present their demands to the university rector, but were intercepted by policemen using hoses and rubber truncheons. They retaliated by hurling stones at the policemen. Many students were arrested, and the professors were detained and suspended.

On the following day, some 2,000 students voted to stage a classroom sit-in strike until three of the four professors were reinstated and the charges against the student demonstrators were dropped. The Madrid students continued their protest in March, and sympathy movements were reported at universities in Barcelona, Granada, and other cities.

Finally, on April 7, after six weeks of agitation in all 13 university centers, the official student syndicate was reorganized by government decree. Students were permitted to elect all representatives to the governing councils of the student union. However, political activity outside the student organization was prohibited.

Prior to the start of the fall term, the government, in an effort to prevent disturbances, ordered new restrictive measures on students. Those with questionable political records were declared ineligible as delegates to the student union. Furthermore, university chancellors were empowered to dismiss students suspected of agitation without the customary trial by a faculty board. Late in November, students at the large universities boycotted the elections for the government-controlled unions and set up their own clandestine organizations.

Labor Protest. On March 12, some 1,000 coal miners launched an attack on police headquarters in the Asturian mining center of Mieres. Authorities claimed that the violence had been instigated by Communists, and one alleged Communist was arrested. The miners had assembled from various points in the province to discuss union problems. Their violent action was precipitated by reports that some of their representatives had been detained by police. Another demonstration of 2,000 workers was dispersed by police armed with clubs on April 7.

Religious Freedom. Late in January, Generalissimo Franco conferred with leaders of the Jewish communities of Madrid and Barcelona concerning the status of the 5,000 Jews in Spain. It was the first time the head of the Spanish state had admitted Jews to an audience since their expulsion from Spain in 1492. The Jewish representatives asked that the Spanish Jewish communities be listed in the official Register of Associations so that they would have corporate identity and thus would be able to hold property and participate in legal proceedings. Franco promised to examine the request. The government was also preparing a bill to extend legal recognition to Spanish Protestants.

Communist Trade. Despite the strong anti-Communist tradition of the Spanish regime, the government decided in January that it would expand cultural and economic exchanges with the Soviet bloc. While it had no intention of reestablishing formal diplomatic relations with the Soviet Union or the other Communist nations of eastern Europe, the government did indicate its sympathy toward the policy of peaceful coexistence. The cabinet decided to permit the Bolshoi Ballet or another prominent Soviet dance group to perform in Spain. In return, Spanish dancers would visit the Soviet Union. Trade between the countries also was expanded.

Trade with Communist Cuba increased five times in 1964, and a new accord signed on Feb. 9, 1965, was expected to accelerate it. During the 1965 negotiations, Spain demanded—and may have been granted—the release of Spanish nationals detained in Cuban prisons for acts against the Castro regime, compensation for the Cuban seizure of Spanish property, and guarantees against further seizures. Cuba is the only Communist country with which Spain maintains diplomatic relations. Spain has historic and cultural ties with her former colony, and there are 40,000 Spanish nationals residing in Cuba.

Gibraltar Issue. A long-term dispute between Spain and Britain over Gibraltar was intensified in 1964 and 1965. In August 1964, Britain granted Gibraltar a new constitution providing for internal self-government. Thereupon Spain imposed severe restrictions on the Spanish-Gibraltar trade on the ground that the sovereignty that was surrendered to Gibraltar should have been ceded to Spain. On March 7, 1965, border passes for all foreigners living in Spain and working in Gibraltar were revoked. The trade restrictions assumed the proportions of a small-scale blockade later in the year, and in December, Spain threatened to close all communications with Gibraltar unless Britain agreed to negotiate the status of the colony.

Economy. Spain's progress toward industrialization was evident in the January announcement that Chrysler International and the Barreiros Diesel company of Spain would begin production of the Dodge

SPAIN · Information Highlights

EUROPE
ASIA
AFRICA

Area: 194,883 square miles.
Population: Spain (July 1, 1965 est.) 31,604,000; African provinces (1964 est.) 511,000 (Spanish North Africa, 155,000; Ifní, 51,000; Spanish Sahara, 42,000; Equatorial Region, 263,000).
Chief Cities (1963 est.): Madrid, the capital, 2,443,152; Barcelona, 1,633,921; Valencia, 503,358; Seville, 459,786; Zaragoza, 343,468; Bilbao, 317,639; Málaga, 307,162.
Government: *Chief of State* and *Premier*—Gen. Francisco Franco (officially assumed power Aug. 4, 1939; life tenure granted July 6, 1947); *Parliament*—Cortes, 595 members.
Religious Faiths: Roman Catholics, 99% of population; others, 1%.
Education: *Literacy rate* (1960)—87% of population aged 15 and over. *Total school enrollment* (1961)—4,625,589 (preschool and primary, 3,706,739; secondary, 564,111; teacher-training, 43,103; technical, 220,486; higher, 91,150).
Finance (1964 est.): *Revenues*, $2,014,000,000; *expenditures*, $2,016,000,000; *public debt*, $2,336,000,000; *monetary unit*, peseta (60 pesetas equal U.S.$1).
Gross National Product (1964): $17,717,000,000.
National Income (1964): $15,417,000,000; average annual income per person, $492.
Economic Indexes (1964): *Industrial production*, 171 (1958=100); *agricultural production*, 134 (1956–57=100); *cost of living*, 137 (1958=100).
Manufacturing (metric tons, 1964): Cement, 8,220,000; wheat flour, 3,096,000; wine, 2,780,000; crude steel, 2,737,000; meat, 672,000; sugar, 468,000; gasoline (1963), 457,000; olive oil, 150,000.
Crops (metric tons, 1964): Grapes, 4,600,000 (ranks 3rd among world producers); wheat, 3,958,000 (rank, 12th); potatoes, 3,945,000 (rank, 10th); sugar beets, 3,397,000 (rank, 13th); barley, 1,610,000 (rank, 11th); citrus fruits, 1,411,000 (rank, 3rd); maize, 1,130,000 (rank, 18th); oats, 381,000 (rank, 19th).
Minerals (metric tons, 1964): Iron ore, 5,231,000 (ranks 18th among world producers); gypsum, 3,863,000 (rank, 6th); anthracite coal, 2,647,000 (rank, 12th); salt, 1,696,000 (rank, 14th); zinc, 89,356 (rank, 13th); lead, 57,362 (rank, 12th); copper, 26,034 (rank, 19th); uranium, 45 (rank, 6th); silver (1963), 4,955,201 troy ounces (rank, 8th).
Foreign Trade (1964): *Exports*, $954,000,000 (chief exports: citrus fruits, $142,000,000; olive oil, $56,000,000); *imports*, $2,259,000,000 (chief imports, 1963: nonelectrical machinery, $363,000,000; crude petroleum, $193,000,000; iron and steel, $110,000,000). *Chief trading partners* (1963): U.S. (took 11% of exports, supplied 16% of imports); Britain (took 16% of exports, supplied 10% of imports); West Germany (took 12% of exports, supplied 13% of imports).
Transportation: *Roads* (1964), 49,121 miles (25,841 paved); *motor vehicles* (1964), 946,136 (automobiles, 635,640); *railways* (1963), 8,400 miles; *merchant vessels* (1964), 330 (1,603,000 gross registered tons); *national airline*, Iberia; *principal airports*, Barcelona, Madrid, Seville, Valencia.
Communications: *Telephones* (1964), 2,283,465; *television stations* (1964), 12; *television sets* (1964), 1,200,000; *radios* (1963), 4,000,000; *newspapers* (1963), 105 (daily circulation, 4,740,000).

Dart compact car at the Barreiros plant near Madrid. It was also announced that a second Spanish nuclear power plant would be established near Burgos. The first was under construction near Madrid by the Westinghouse Electric Corporation.

Under Spain's first economic development plan (1964–67) the cities were becoming more prosperous, but the rural areas were becoming poorer and more stagnant. As the result of unfavorable weather, poor soil, archaic farming methods, and inadequate marketing systems, many farmers fled to the cities or across the Pyrenees in search of employment in other nations of western Europe.

An indictment of the rural situation in Spain was contained in a pastoral letter by Bishop Añoveros of Cádiz and Ceuta published in the Catholic periodical *Ecclesia* in September. He charged that land holdings were either too small for economic cultivation or too large for just exploitation, and that living conditions on the farms were neither "Christian" nor "human."

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SPANISH LITERATURE

Spanish literature appears to be in a period of reassessment. The continued dominance of established writers is of real concern to critics. Although the abundance of literary prizes has stimulated young writers, no new movement has been defined. The overwhelming number of awards and charges of favoritism have led to demands for reforms.

Fiction. The National Novel Prize for 1964 was declared vacant. The most important novelists continue to be such prolific and talented veterans as Camilo José Cela and Juan Antonio de Zunzunegui. Cela has no serious rivals as Spain's leading novelist. His collected short stories and novelettes appeared in 1965 as volumes 3 and 4 of his completed works, and in recent years he has published a series of gifted satires on social ills.

Ana María Matute, one of the best of the younger writers, was highly praised for a children's book, *El polizón de Ulises*. Alejandro Núñez Alonso received the Critics' Prize for his *Gloria en subasta*. The Gabriel Miró Prize, one of the newest and most important, went to the youthful Gregorio Javier for *Siglo XX*, a novel portraying youth of different nationalities who are obsessed by the same contemporary problems. José Antonio Mases produced *La invasión*, a realistic fictional narrative of Fidel Castro's rise to power.

Two important collections of short novels appeared in 1965. Ignacio Aldecoa's *Los pájaros de Baden Baden* gives four vivid portrayals of modern society, and Arturo del Hoyo's *Primera caza* consists of eight works reflecting the human response to the impact of external events. Carlos Murciano's short story *El viejo*, was widely praised. Its author is one of the best of the younger generation.

Poetry. The veteran Vicente Aleixandre published *Presencias*, an anthology of his objective, less personal poems, which shed new light on a figure widely regarded as a leader of the hermetic school. Blas de Otero, one of the leading younger figures, was represented by *Que trata de España*. José Luis Cano's *Poesía 1942 1962* (1964) demonstrates the author's technical versatility and skill in creating mood. Ramón de Garcíasol's *Fuente serena* is a traditional combination of Franciscan contemplation and ethical commitment.

The Adonais Prize went to Diego Jesús Jiménez for *La ciudad*, a nocturnal contemplation of the city in which the poet's meditation is contrasted with the actions of others. The strength of the Catalan literary movement is attested by *L'estrella d'en Perris*, by J.V. Foix, a finalist in the competition for the 1965 International Literature Prize. The 1964 National Prize for Literature was awarded to Federico Muelas for *Rodando entre silencio*.

Guillermo de Torres and Aurora de Albornoz edited the *Obras: Poesía y Prosa* of Antonio Machado. The collection makes available nearly all the work of one of the giants of 20th century literature.

Theater. The theater is heavily dominated by a combination of foreign works and plays by the established Spanish dramatists. Younger playwrights are strongly influenced by Antonio Buero Vallejo, and there are few signs of a trend away from their realistic approach, even though Buero himself has gone beyond mere realism in his recent works.

Among established figures, Miguel Mihura added to his stature with *Ninette y un señor de Murcia;* his apparently facile comic flair often serves to make his satirical approach acceptable to a wide audience. Recent French productions of his works have brought him acclaim among French critics who see in his works strong resemblances to the avant-garde theater.

The general weakness of the Spanish stage was visible in the large number of productions of works by Alejandro Casona (d. 1965), whose plays were authorized for commercial productions only after his recent return from exile. In spite of the obsessive insistence of his basic themes, Casona's works virtually monopolized the stage. The majority of such new work as is being done takes place in the university theaters, but there are serious obstacles to innovation in the professional theater.

Nonfiction. The Fastenrath Prize for Criticism was awarded to Pedro de Lorenzo for his study of the Spanish monk, scholar, and poet Fray Luis de León (1527–1591). José Olivio Jiménez' *Cinco poetas del tiempo* and Carlos Leal's *La poesía de [Pedro] Salinas* were important contributions to the study of contemporary poetry. Francisco Umbral studied the romantic satirist and playwright Mariano José de Larra (1809–1837) in *Anatomía de una dandy*.

Alfonso Sastre continued his provocative theoretical works in *Anatomía del realismo*, and Domingo Paniagua published the first volume of his important study of cultural periodicals, *Revistas culturales contemporáneas* (1897–1912). Américo Castro's polemical approach to Spanish cultural history, which stresses the contribution of the Jewish and Moorish formative elements, produced *"La Celestina" como contienda literaria*, which relates this provocative late 15th century work to the expulsion of the Jews in 1492.

Translations. Important translations in English during the year 1965 included: P.A. de Alarcón's *The Three-Cornered Hat*, tr. by H.F. Turner; Francisco Ayala's *Death as a Way of Life*, tr. by Joan MacLean; Julio Caro Baroja's *The World of the Witches*, tr. by Nigel Glendinning; Camilo José Cela's *The Family of Pascual Duarte*, tr. by Anthony Kerrigan; the *Collected Works* of St. John of the Cross, tr. by Kieran Kavanaugh and Otilio Rodríguez; Ana María Matute's *The Lost Children*, tr. by Joan MacLean; Juan Valera's *Pepita Jiménez*, tr. by Harriet de Onís; Benito Pérez Galdós' *Miau*, tr. by J.M. Cohen; and Antonio de Villegas' *El Abencerraje*, tr. by John E. Keller.

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SPORTS

THE SPORTS WORLD lost a major figure in 1965 when Casey Stengel (r.) retired as manager of the New York Mets. With him in press box is Mets' President George Weiss.

SPORTS

Although some facets of their sports were deemed to be in such critical condition as to require congressional and federal court inspection, American fans acclaimed excellent teams and several great performers in 1965.

The U.S. Senate, perturbed by criticism of the Cassius Clay-Sonny Liston heavyweight championship fight in May, conducted hearings with an idea of establishing federal boxing control. Although the House did pass legislation toward that end, the proposal fizzled out.

Later, another Senate committee aired the dispute between the Amateur Athletic Union (AAU) and the National Collegiate Athletic Association (NCAA) over control of amateur sports, especially track and field. The controversy was magnified by the first Soviet track victory over the United States in Kiev in August. The Russians won partly because the NCAA had barred its members from competing in AAU championship meets, which are the basis for picking members of the team. At the committee's orders, a panel of five was named by Vice President Hubert Humphrey to arbitrate the differences.

As the year ended, baseball awaited the disposition of suits in Wisconsin to negate the transfer of the Milwaukee Braves to Atlanta.

On the playing fields, the fans who came in greater numbers than ever thundered their ovations to the triumphs of the Boston Celtics, the University of California at Los Angeles (UCLA), and Bill Bradley in basketball; the Detroit Red Wings, Montreal Canadiens, Gordie Howe, and Bobby Hull in hockey; the Los Angeles Dodgers, the Minnesota Twins, Sandy Koufax, Willie Mays, and Jim Maloney in baseball; the Green Bay Packers, Cleveland Browns, Baltimore Colts, Buffalo Bills, San Diego Chargers, Gale Sayers, Jim Brown, and Don Chandler in pro football, as well as a host of college football teams and players.

There were also the fine achievements of Roy Emerson, Fred Stolle, Margaret Smith, Arthur Ashe, and Manuel Santana in tennis; Gary Player, Jack Nicklaus, Dave Marr, Billy Casper, and Kathy Whitworth in golf; Jim Clark, who startled the auto racing world by outspeeding American drivers at Indianapolis in a sensational run, as well as outdriving the European drivers in Grand Prix competition until he had the world's championship won; Ron Clarke, Michel Jazy, and Randy Matson in track and field; Steve Clark, Roy Saari, and a score of girl swimmers; the Harvard, Navy, and Vesper crews; Johnny Longden, who rode his 6,000th winning race horse; and Mrs. Jeanne Omelenchuk, who won all six senior women's races in both the national outdoor and open outdoor speed skating events.

There were fine tributes, too, for those who withdrew from active participation in sports. Casey Stengel left baseball because of a broken hip just before his 75th birthday. Al Lopez, who had managed the two teams (Cleveland in 1954 and the Chicago White Sox in 1959) that had taken the pennant away from Stengel when he managed the New York Yankees, moved to the White Sox front office. Ford Frick completed the last stage of his retirement as commissioner of baseball, and Gen. William D. Eckert was named to replace him. Bob Pettit ended his pro basketball career with a record of 20,880 points. Sugar Ray Robinson hung up his boxing gloves permanently, and Su Mac Lad was sent to pasture with earnings of $884,755, the most ever won by a harness horse.

UPI

Among the more enduring achievements were the winning by the Boston Celtics of the National Basketball Association championship for the 7th consecutive year, tying the monopoly mark of the 1949–55 Detroit Red Wings in winning the National Hockey League championship; the pitching of a perfect game by Sandy Koufax, the ninth in baseball history; the kicking of six field goals in one game by Charlie Gogolak, of Princeton, for a collegiate record which tied the pro mark of Gino Cappeletti, of the Boston Patriots; Michel Jazy's 3:53.6 mile run; and Randy Matson's 70-foot, 7-inch shot put.

Baseball became an indoor game in Houston, where the Astros played in a new domed stadium that had constant temperatures and required no rain checks.

The chief fascinations, aside from baseball, were golf, where tournament courses were too small for the tremendous galleries, and football, especially the professional leagues, which attracted hordes to the stadiums or kept them glued to their TV sets.

Part of the fascination, too, was in watching the battle between the pro leagues to sign gifted college seniors who were hiring tax lawyers before receiving their diplomas. Joe Namath, Alabama quarterback, topped the 1965 class by receiving a contract reportedly assuring him over $400,000 from the New York Jets. As 1965 action officially ended with the bowl games on New Year's Day of 1966, Donny Anderson, Texas Tech back reportedly refused an $887,000 package from Houston of the American Football League and accepted a $600,000 deal with Green Bay of the National Football League. Possibly a dozen more players were getting pay packages in six figures and two of the NFL teams—St. Louis and Chicago—had given up attempts to sign their top-rated draft choices.

ARCHERY

World Championships

(Vaesteraas, Sweden, July 20–23)

Men—Matti Haikonen, Finland (2,313 pts.)
Women—Marie Lindholm, Finland (2,214)
Team—Men: United States (Joe Thornton, Ben Walker, Dick Tone, 6,792); women: United States (Grace Amborski, Helen Thornton, Ardelle Mills, 6,358)

National Archery Association Championships

(Lafayette, Ind., August 2–6)

Men—George Slinzer, Luzerne, Pa. (3,559); high scorer was Hans Wright, Australia (3,684)
Women—Mrs. Nancy Pfeiffer, Fort Lauderdale, Fla. (3,746)
Crossbow—George Zurik, Moline, Ill. (2,782)
Pro—George Clauss, Saginaw, Mich. (3,745)
Team—Cincinnati Archers (Gerry Koelke, John Lamb, Marv Matthews, 2,769)

National Field Archery Association

(Watkins Glen, N.Y., July 26–30)

Freestyle—*Men:* Richard Roberts, Three Rivers, Mich. (2,692); *women:* Mrs. Lou Shine, Glendale, Calif. (2,437).
Instinctive—*Men:* Clifford Necessary, Richmond, Va. (2,528); *women:* Mrs. Betty Grubbe, Oklahoma City (1,980)

AUTO RACING

World Championship Grand Prix Races

South Africa (East London, Jan. 1)—Jim Clark, Scotland (driving a Lotus-Climax; distance, 207 miles; time, 2:06:46; 97.97 mph)
Monaco (Monte Carlo, May 30)—Graham Hill, England (BRM; 195 mi; 2:37:39.6; 74.34 mph)
Belgium (Francorchamps, June 13)—Jim Clark (280 mi; 2:23:34.8; 117 16 mph)
France (Clermont-Ferrand, June 27)—Jim Clark (200 mi; 2:14:38.4; 89.22 mph)
Britain (Silverstone, July 10)—Jim Clark (234 mi; 2:05:25.4; 112.02 mph)
Netherlands (Zandvoort, July 18)—Jim Clark (208.4 mi; 2:03:59.1; 100.86 mph)
Germany (Nuerburgring, Aug. 1)—Jim Clark (212 mi; 2:07:52.4; 99.79 mph)
Italy (Monza, Sept. 12)—Jackie Stewart, Scotland (BRM; 272 mi; 2:04:52.8; 130.46 mph)
United States (Watkins Glen, N.Y., Oct. 3)—Graham Hill (253 mi; 2:20:36.1; 107.98 mph)
Mexico (Mexico City, Oct. 24)—Richie Ginther, Granada Hills, Calif. (Honda; 201.7 mi; 2:08:32.1; 94.2 mph)

Other Races

Indianapolis 500 (May 31)—Jim Clark, Scotland (Lotus-Ford; 3:19:05.34; 150.686 mph; purse, $166,621)
12-Hour Endurance (Sebring, Fla., March 27)—Jim Hall and Hap Sharp, Midland, Tex. (Chaparral-Chevrolet; 1,019 mi; 84.72 mph)
24-Hour Endurance (Le Mans, France, June 19–20)—Masten Gregory, U.S., and Jochen Rindt, Austria (Ferrari; 2,906.23 mi; 121.09 mph)
Daytona Continental (Feb. 28)—Ken Miles, Hollywood, and Lloyd Ruby, Wichita Falls, Tex. (Ford GT; 1,243 mi; 12:27.9; 99.944 mph)
Daytona 500 (Feb. 14)—Fred Lorenzen, Elmhurst, Ill. (Ford; race stopped after 332.5 mi; 2:20:56; 141.539 mph)
Riverside 500 (Jan. 17)—Dan Gurney, Costa, Calif. (Ford; 5:41:42; 87.71 mph)
Southern 500 (Darlington, S.C., Sept. 6)—Ned Jarrett, Camden, S.C. (Ford; 115.878 mph)
Atlanta 500 (April 10)—Marvin Panch, Daytona Beach, Fla. (A. J. Foyt, Houston, drove final 121 laps, of 334 laps, in relief), (Ford; 129.152 mph)

Individual Champions

World—Jim Clark, Scotland
U.S. Auto Club Big Car—Mario Andretti, Nazareth, Pa.
U.S. Auto Club Stock Car—Norman Nelson, Racine, Wis.
NASCAR—Ned Jarrett, Camden, S.C.

Sports Car Club of America

U.S. Road Racing Champions

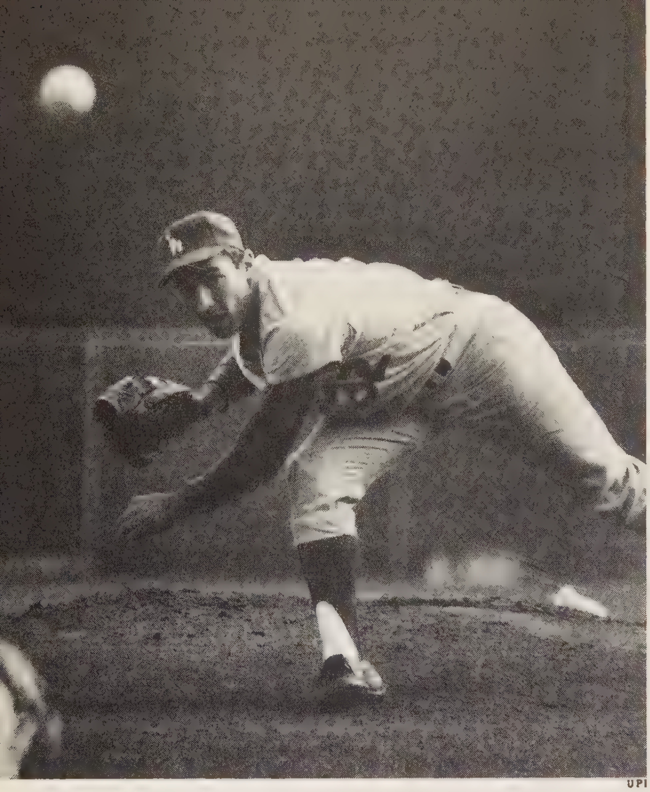
Driver—George Follmer, Pasadena, Calif. (Lotus Porsche, 60 pts)
Manufacturer—(tie) Porsche and Shelby American (63 pts)

National Champions

A Production—Harold Keck, Hellertown, Pa. (Cobra, average speed 101.825 mph)
B Production—Jerry Titus, Canoga Park, Calif. (Mustang, 100.108 mph)
C Production—Bill Young, La Canada, Calif. (Lotus Elan, 99.216 mph)
D Production—Steve Froines, Oakland, Calif. (Triumph TR-4, 95.082 mph)
E Production—Allan Barker, Louisville, Ky. (Austin Healey, 73.566 mph)
F Production—Brian Fuerstenau, Annandale, Va. (Triumph TR-3, 72.261 mph)
G Production—Emmett Brown, Santa Maria, Calif. (MG Midget, 71.508 mph)
H Production—Peter Feistman, Asheville, N.C. (Fiat-Abarth, 68.158 mph)
C Modified—Joe Starkey, Dallas (McLaren-Elva, 102.725 mph)
D Modified—Charles Gates, Rolling Hills, Calif. (Triumph TR-4A, 90.540 mph)
E Modified—Lewis Kerr, Niantic, Conn. (Brabham BT, 100.650 mph)
F Modified—Brooke Doran, Burket, Ind. (Elva, 96.518 mph)
G Modified—Jim Baker, Atlanta (Lotus 23B, 77.579 mph)
H Modified—Gerald Mong, Medina, Ohio (Bobsy-Saab, 74.44 mph)
Formula Vee—Dan Fowler, Minneapolis (Beach, 69.581 mph)
Formula B—Earl Jones, Los Angeles (Le Grand-Alfa, 81.859 mph)
Formula C—Larry Skeels, Madison, Wis. (Cooper-BMC, 77.154 mph)

BADMINTON

All-England Championships (Wembley, England, March 24–27)—*Men's singles:* Erland Kops, Denmark; *women's singles*—Ursula Smith, England; *men's doubles:* Ng Boon Bee and Tan Yee Khan, Malaysia; *women's doubles:* Mrs. Ulla Rasmussen Strand and Mrs. Karin Jorgensen, Denmark; *mixed doubles:* Finn Kobbero and Mrs. Ulla Strand, Denmark.



UPI

SANDY KOUFAX delivers one of his highly effective pitches that shut out the Minnesota Twins as his Los Angeles Dodgers won the final game of the 1965 World Series, 2–0.

U.S. Championships (New Orleans, April, 13–17)— *Men's singles*— Erland Kops, Denmark; *women's singles:* Mrs. Judy Devlin Hashman; *men's doubles:* Bob McCoig, Scotland, and Tony Jordan, England; *women's doubles:* Mrs. Margaret Barrand, England, and Jennifer Pritchard, England; *mixed doubles:* Bob McCoig and Mrs. Margaret Barrand.

BASEBALL

Major league baseball produced several surprises in 1965—a new champion, a new commissioner, and a second-division New York Yankee team. Performing as expected, however, were Sandy Koufax, Los Angeles Dodger pitcher, and Willie Mays, San Francisco Giant outfielder, who continued to amass records that eventually will place them in the Hall of Fame.

The Los Angeles Dodgers, playing old-fashioned baseball because they lacked power hitters, overcame the teams favored to win the National League pennant with their pitching, then outlasted the Minnesota Twins to win a seven-game World Series. The Twins succeeded to the American League title that the Yankees had won in the five previous years.

After some delay, the club owners, in November, selected William D. Eckert, a retired Air Force general with no previous baseball connections, as commissioner. Appointed as Eckert's chief assistant in a proposed cabinet of five deputies was Lee MacPhail, then general manager of the Baltimore Orioles, who was given the title of administrator. Eckert was given a seven-year contract, and he replaced Ford Frick, who retired after holding the post for 15 years.

Another retirement was that of ever-popular Casey Stengel. The "Old Professor" suffered a broken hip in a fall on July 25, a few days before his 75th birthday. He resigned as manager of the New York Mets on August 30, ending his active baseball career after 55 years. Wes Westrum, one of Casey's coaches, became interim manager, and was given the job permanently after the season's end.

The Mets finished in the cellar as usual, but achieved one big victory—they finally defeated Koufax after losing to him 13 times. Sandy was beaten only seven other times in league play as he won 26 games, although afflicted with an arthritic elbow that required treatment before and after each game. Pitching a perfect game against Chicago on September 9, he became the first man to pitch four no-hitters in his career. In the game he struck out 14 batters—a feat that helped him set a major league season record of 382 strikeouts. Koufax won the Cy Young Award as the year's outstanding pitcher, but the National League's most valuable player honor went to Mays. Willie's batting kept the Giants in pennant contention. He hit 52 home runs, setting a record for a month with 17 in August, and raising his lifetime total to 505, second only in the National League to Mel Ott's 511.

SANDY KOUFAX of the Los Angeles Dodgers won the Cy Young Award as the best pitcher of 1965, by the unanimous choice of the 20-member committee of the Baseball Writers' Association of America. Sandy made the writers' choice easy by building an extraordinary series of accomplishments during the year—26 regular-season victories, his fourth no-hitter in four years (a perfect game in which he set down 27 Chicago Cubs in a row), seven other regular-season shutouts, an all-time season record of 382 strikeouts, the lowest earned run average in the National League, and two shutouts in the World Series, one of them in the deciding game.

Sanford Koufax was born in Brooklyn on Dec. 30, 1935. He attended the University of Cincinnati on a basketball scholarship for a year before joining the Dodgers, then in Brooklyn. Standing 6 feet, 2 inches, and weighing 205 pounds, the lefthander suffers a chronic arthritic condition in his left elbow. Yet, he did not miss a starting turn during the 1965 season.

The Giants and Dodgers put together long winning streaks in their closing battle for the pennant. The Giants won 14 in a row early in September, taking over first place from the Dodgers. However, when 4½ games behind and in third place, the Dodgers countered with a 13-game winning string behind the pitching of Koufax and Don Drysdale. The Dodgers won the championship on the next-to-last day of the season.

By this time Minnesota had long since established itself as the champion of the American League. The Twins broke a tie for the lead with Cleveland on July 5, and won going away. They were inspired by the infield play and timely hitting of shortstop Zoilo Versalles, and the pitching of Jim Grant, who led the league in victories with 21. Tony Oliva, their right fielder, won the batting title for the second year in a row. Versalles was voted the American League's most valuable player.

The baseball world, however, focused much of its attention on the Yankees, trying to discover what was wrong with them. The perennial champions started slowly, never got untracked, and wound up in sixth place. The New Yorkers finally rose to the .500 level on August 14, but they lost more than they won from there on in and finished with a percentage of .475, 10 games out of the first division and 25 behind the Twins. It was their most dismal showing since 1925, and was brought about in part because Mickey Mantle spent much of the season on the bench with injuries, as did Elston Howard and Roger Maris.

The Twins routed Drysdale in the first game of the World Series at the Metropolitan Stadium in Bloomington, Minn., and, surprisingly, continued winning against Koufax in the second for a 2–0 lead in games. Grant and Jim Kaat were the winning pitchers. However, when play switched to Los Angeles, the Dodgers, using the bunt, the steal, and the hit-and-run in the style that had brought them the pennant, won the next three games behind the excellent pitching of Claude Osteen, Drysdale, and Koufax.

Back in Minnesota, the Twins blasted Osteen, tying the Series again, with Grant homering to help win his own game. Koufax, of course, was called on to pitch the deciding game, and he responded with a three-hit shutout as the Dodgers beat Kaat, 2–0, to regain the world championship they had held in 1963.

The year was also marked by two unusual incidents on the field. Sam Mele, the Twins' manager, became upset by a decision against his team and apparently took a swing at umpire Bill Valentine; he was fined $500 and suspended for five days. In a more serious dispute, Juan Marichal, Giant pitcher, hit Dodger catcher John Roseboro on the head with a bat. Marichal accused the Dodger of throwing at him. He was fined $1,750 and suspended for eight days.

There were other notable pitching performances. Jim Maloney, of Cincinnati, pitched two no-hitters but got credit for only one. On June 14, he held the New York Mets hitless until the 11th inning, when Johnny Lewis' homer beat him, 1–0. On August 19, he pitched 10 hitless innings before his teammates got a run against the Chicago Cubs. Dave Morehead, of Boston, pitched the American League's only no-hitter, beating Cleveland, 2–0, on September 16.

In addition to Westrum, new managers named at the end of the season included Ed Stanky, who replaced Al Lopez, with the latter moving into the Chicago White Sox front office; Leo Durocher, who took over the managerial job with the Chicago Cubs; Don Heffner, a Met coach, who went to Cincinnati in place of Dick Sisler; and Grady Hatton, who became Houston's field manager after both general manager Paul Richards and field manager Luman Harris were separated from further supervision in the Astros' new domed arena.

Three physical changes are scheduled for the 1966 season. The Angels, who officially changed their name from Los Angeles to California in September 1965, will operate out of Anaheim; the St. Louis Cardinals will play in a new stadium; and Atlanta will enter the National League with the Braves, formerly a Milwaukee team. The switch of the

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UPI

IN 1965 WORLD SERIES, Minnesota Twins shortstop Zoilo Versalles (r.) steals second base against Dodger shortstop Maury Wills (l.) in sixth game on October 14. The play later was disallowed, but Twins won 5–1, tying series at three games each.

Braves' franchise to Atlanta, authorized by the league after the 1964 season, was being contested in the courts. The city and county of Milwaukee and the state of Wisconsin were alleging illegal use of monopoly powers by the National League and baseball in general in denying them a franchise. They were hoping to force the Braves' owners to return the team to Milwaukee.

Professional—Major Leagues

AMERICAN LEAGUE
(Final Standings, 1965)

Club	Won	Lost	Pct.
Minnesota	102	60	.630
Chicago	95	67	.586
Baltimore	94	68	.580
Detroit	89	73	.549
Cleveland	87	75	.537
New York	77	85	.475
California	75	87	.463
Washington	70	92	.432
Boston	62	100	.383
Kansas City	59	103	.364

NATIONAL LEAGUE
(Final Standings, 1965)

Club	Won	Lost	Pct.
Los Angeles	97	65	.599
San Francisco	95	67	.586
Pittsburgh	90	72	.556
Cincinnati	89	73	.549
Milwaukee	86	76	.531
Philadelphia	85	76	.528
St. Louis	80	81	.497
Chicago	72	90	.444
Houston	65	97	.401
New York	50	112	.309

World Series—Won by Los Angeles Dodgers; paid attendance 7 games, 364,326; net receipts, $2,975,041; commissioner's share, $446,256.23; players' share, $885,612.21, including full shares of $10,297.43 for each Dodger and $6,634.36 for each Twin; clubs' share, $410,793.29; leagues' share, $410,793.29.

Standings: Los Angeles (NL) won 4, lost 3, pct. .571; Minnesota (AL) won 3, lost 4, pct. .429

First Game (Metropolitan Stadium, Oct. 6): Minnesota 8, Los Angeles 2; *Second Game* (Metropolitan Stadium, Oct. 7): Minnesota 5, Los Angeles 1; *Third Game* (Dodger Stadium, Oct. 9): Los Angeles 4, Minnesota 0; *Fourth Game* (Dodger Stadium, Oct. 10): Los Angeles 7, Minnesota 2; *Fifth Game* (Dodger Stadium, Oct. 11): Los Angeles 7, Minnesota 0; *Sixth Game* (Metropolitan Stadium, Oct. 13): Minnesota 5, Los Angeles 1; *Seventh Game* (Metropolitan Stadium, Oct. 14): Los Angeles 2, Minnesota 0

All-Star Game (July 13)—National 6, American 5

Most Valuable Players—*National:* Willie Mays, San Francisco centerfielder; *American:* Zoilo Versalles, Minnesota shortstop

Cy Young Memorial Award (outstanding pitcher)—Sandy Koufax, Los Angeles Dodgers (26–8)

Rookies of the Year—*American:* Curt Blefary, Baltimore right fielder; *National:* Jim LeFebvre, Los Angeles second baseman

Leading Batters (percentage)—*American:* Tony Oliva, Minnesota, .321; *National:* Roberto Clemente, Pittsburgh, .329; (Home Runs)—*American:* Tony Conigliaro, Boston, 32; *National:* Willie Mays, San Francisco, 52; (Runs Batted In)—*American:* Rocky Colavito, Cleveland, 108; *National:* Deron Johnson, Cincinnati, 130.

Leading pitchers (best percentage, 10 or more victories)—*American:* Jim Grant, Minnesota (21–7), .750; *National:* Sandy Koufax, Los Angeles (26–8), .765; (Most Victories)—*American:* Grant, 21; *National:* Koufax, 26; (Earned Run Average)— *American:* Sam McDowell, Cleveland, 2.18; *National:* Koufax 2.04

Professional—Minor Leagues

(When two teams are named, the first won the regular season championship and the second won the play-off; otherwise the team named won both. Letters in parentheses indicate league class.)

International (AAA)—Columbus; Toronto
Pacific Coast (AAA)—Oklahoma City (Eastern Division and play-off); Portland (Western Division)
Eastern (AA)—Pittsfield (no play-off)
Mexican (AA)—Mexico City Tigers (no play-off)
Southern (AA)—Columbus (no play-off)
Texas (AA)—Albuquerque (Western Division and play-off); Tulsa (Eas ern Division)
California (A)—Stockton
Carolina (A)—Newport News; Portsmouth
Florida State (A)—Fort Lauderdale (won both halves)
Mexican Center (A)—San Luis Potosi (no play-off)
Mexican Southeast (A)—Villahermosa; Campeche
Midwest (A)—Burlington (no play-off)
New York-Pennsylvania (A)—Binghamton (no play-off)
Northern (A)—St. Cloud (no playoff)
Northwest (A)—Lewiston; Kennewick
Western Carolinas (A)—Salisbury; Rock Hill
Appalachian (Rookie)—Salem (no play-off)
Pioneer (Rookie)—Caldwell (no play-off)
Florida Rookie—Bradenton Astros (no play-off)

Other Champions

American Legion—Charlotte, N.C.
Babe Ruth League—New Orleans
Bronco League—Birmingham, Ala.
Colt League—Greensboro, N.C.
Connie Mack League—Portland, Ore.
Dixie Youth—Bankhead, Ala.
Hearst Sandlot—U.S. All-Stars 9, N.Y. City 3
Little League World Series—Windsor Locks, Conn.
Little League Seniors—Monterrey, Mexico
National Amateur Federation—Detroit
National Amateur Federation Junior—Hyattsville, Md., American Legion Post 108
National Baseball Congress—Wichita Dreamliners
Pony League—Long Beach, Calif.
Stan Musial League—Waterloo, Ind.
Veterans of Foreign Wars—Lebanon Valley, Pa.

Intercollegiate Team Champions

NCAA—Arizona State
NAIA—Carson-Newman
College Conferences—*Athletic Association of Western Universities:* Stanford (CIBA); *Washington State* (Northern Division); *Atlantic Coast;* Maryland; *Big Eight:* Missouri; *Big Ten:* Ohio State; *Central Intercollegiate AA:* Shaw University; *Ivy:* Army; *Mid-American:* Ohio University; *Mid-Atlantic:* Lafayette; *Missouri Valley:* St. Louis; *Southeastern:* Mississippi State; *Southern:* Furman; *Southwestern:* Texas; *Western:* Arizona State; *Yankee:* Connecticut and Vermont (tie)

UPI

PROFESSIONAL BASKETBALL'S Bill Russell (l.), of Boston Celtics, stops Happy Hairston (r.), of Cincinnati Royals, from completing a layup shot in a league game on Oct. 28.

BASKETBALL

Basketball's champions, UCLA and the Boston Celtics, rolled on to greater glory in 1965, but much of the spotlight fell on the accomplishments of one player—Princeton's Bill Bradley.

UCLA retained the National Collegiate Athletic Association championship for a second season and the Celtics chalked up an unprecedented 7th consecutive National Basketball Association championship.

William Warren Bradley, 6-foot, 5-inch, 200-pound son of a Crystal City (Mo.) banker, led Princeton to its 3rd straight Ivy League title and to 3rd place in the NCAA tournament. Bill drew crowds as if he were a high-salaried pro star, and became player of the year—possibly one of the greatest ever. A first-rate student as well, Bradley won a Rhodes Scholarship, disdained a high-priced offer to turn professional, and continued his studies at Oxford University in the fall. Bradley completed his collegiate career by scoring 58 points—an NCAA tournament record—as Princeton rolled up a record 118 points to triumph over Wichita State for 3rd place.

Top honors in the NCAA were swept up again by the UCLA Bruins, who defeated Michigan in the final, 91 to 80. The Bruins, beaten only by Iowa and Indiana during the season, completed a two-year record of 58 victories in 60 games.

The Celtics romped to an early NBA lead, set a record in winning 62 of their 80 league games, and then defeated Philadelphia and Los Angeles in the play-offs. Their big guard, Bill Russell, again was voted the most valuable player. New York's Willis Reed was named rookie of the year.

Midway through the season, Wilt Chamberlain was sold to the Philadelphia 76ers, in his home town, by San Francisco (which lost a record 17 straight games) for three players and cash estimated at about $150,000. During the summer Chamberlain signed a three-year contract with the 76ers calling for more than $100,000 a year, and the Celtics agreed to sign Russell on similar terms.

Johnny Kerr, of Baltimore, finally had to sit out a game on November 5—the first since he started league play in 1954. His consecutive game streak thus ended at 834 regular-season games.

BILL RUSSELL gathered in professional basketball's 1965 most valuable player honors—the Sam Davis Award—with as much ease as he gathers in rebounds for the Boston Celtics. The 6-foot 9-inch center won the award by unanimous vote of the Metropolitan Basketball Writers Association. So sure is his basketball sense, and so fast are his reflexes, that Russell blocks opponents' layup shots with ease. Opposing teams have made it virtually standard procedure to assign two rebounders to Russell, but he continues to dominate the boards.

Russell was born in Monroe, La., on Feb. 12, 1934. He led the University of San Francisco through an unbeaten season in 1955–56, and helped the 1956 U.S. Olympic team sweep to victory in Australia. Russell teamed with Bob Cousy to give the Celtics their first championship in 1957. Although Cousy retired in 1963, Russell—regarded by many as the best defensive basketball player of all time—kept the Celtics rolling to eight titles in nine years.

Amateur

Major Tournaments

NCAA—UCLA (defeated Michigan, 91–80)
NCAA Small College—Evansville (defeated Southern Illinois, 85–82)
National Invitation (New York)—St. John's (defeated Villanova, 55–51)
National Intercollegiate (NAIA)—Central State of Ohio (defeated Oklahoma Baptist, 85–51)
Men's AAU—Armed Forces All-Stars (defeated Denver, 77–75)
Women's AAU—Nashville Business College (defeated Wayland Baptist College, Plainview, Tex., 47–42)

College Conference Champions

(Figures in parentheses represent wins and losses in conference games only)

Athletic Association of Western Universities—UCLA (14–0)
Atlantic Coast—North Carolina State (10–4); won championship tournament
Big Eight—Oklahoma State (12–2)
Big Ten—Michigan (13–1)
Central Intercollegiate AA—North Carolina A & T (15–3)
Eastern (Ivy) League—Princeton (13–1)
Mason-Dixon—Northern: Mt. St. Mary's (12–2); Southern: Randolph-Macon (12–2)
Mid-American—Ohio University and Miami (11–1); Ohio won playoff to enter NCAA tourney
Middle Atlantic—*University Division:* St. Joseph's (25–1); *Northern College Division:* Albright (13–1); *Southern College Division:* Dickinson (13–2)
Missouri Valley—Wichita (11–3)
Ohio Valley—Eastern Kentucky (13–1)
Southeastern—Vanderbilt (15–1)
Southern—West Virginia (8–6); won championship tournament
Southwest—Southern Methodist and Texas (10–4); SMU won play-off to enter NCAA tourney
Western Athletic—Brigham Young (8–2)
West Coast Athletic—San Francisco (13–1)
Yankee—Connecticut (10–0)

Professional

NATIONAL BASKETBALL ASSOCIATION

(Final Standings, 1965)

Eastern Division				Western Division			
	Won	Lost	Pct.		Won	Lost	Pct.
Boston	62	18	.775	Los Angeles	49	31	.613
Cincinnati	48	32	.600	St. Louis	45	35	.563
Philadelphia	40	40	.500	Baltimore	37	43	.463
New York	31	49	.388	Detroit	31	49	.388
				San Francisco	17	63	.213

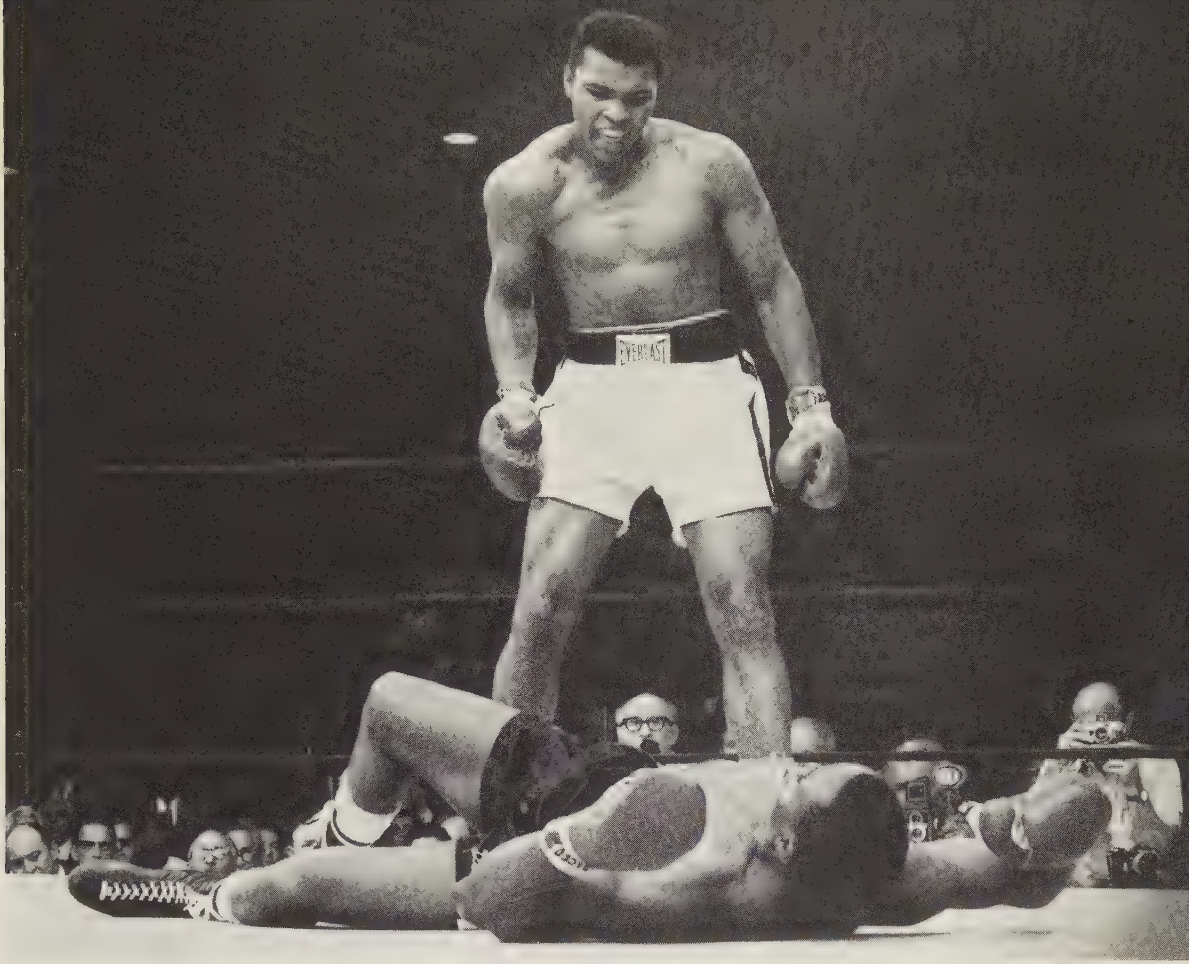
Eastern Division Play-offs—Boston defeated Philadelphia, 4 games to 3. *Western Division Play-offs*—Los Angeles defeated Baltimore, 4 games to 2. *NBA Championship*—Boston defeated Los Angeles, 4 games to 1.

BOBSLEDDING

World Championships (St. Moritz, Switzerland, Jan. 23–31)—*2-man:* Anthony Nash (pilot) and Robin Dixon (brake), Britain (4-heat total, 5:11:30); *4-man:* Victor Emery (pilot), Gerald Presley, Mike Young, Peter Kirby (brake), Canada (4-heat total, 5:17.78)
AAU National Championships (Lake Placid, N.Y., Feb. 28–29)—*4-man:* Sergio Zardini (pilot), Paul Levesque, Doug Anakin, Peter Kirby (brake), Canada (2-heat total, 2:16.72); *2-man:* Larry McKillip (pilot) and Charles Hoffer, Saranac Lake, N.Y. (4-heat total, 4:44.95)
North American Championships (Lake Placid, Feb. 21)— *2-man:* Bill Thomas (pilot) and John Mignacci (brake), Mechanicville, N.Y. (4-heat total, 4:52.6) *4-man:* canceled, dangerous track

BOWLING

American Bowling Congress Tournament (St. Paul, Minn.)—*Regular Division: singles,* Kenneth Roeth, Dubuque, Iowa (700 pins); *doubles,* Buzz Bosler and Don Slak, Milwaukee (1,300); *all events,* Tom Hathaway, Los Angeles (1,922); *team,* G. & C. McDermitt, Inc., Pittsburgh (3,074). *Classic Division: singles,* Bob Kennicutt Norwalk, Calif. (697); *doubles,* Larry Oakar, Cleveland, and Bill Beach, Sharon, Pa. (1,355); *all events,* Tom Hennessey, St. Louis 2,549); *team,* Thelmal Lanes, Louisville, Ky. (6,151). *Booster Division: Team,* Ridge Bowl No. 1, Chicago (2,795).


UPI

HEAVYWEIGHT BOXER CASSIUS CLAY, one of the most colorful fighters in recent years, stands over floored ex-champion Sonny Liston in the first round of their controversial second bout (held May 25, 1965), taunting Liston to get up and fight.

Women's International Bowling Congress Tournament (Portland, Ore.)—*singles:* Doris Rudell, Whittier, Calif. (659); *doubles:* Mrs. Betty Remmick and Mary Ann White, Denver (1,263); *all events:* Donna Zimmerman, Norwalk, Calif. (1,833); *team:* Belmont Bowl, Chicago (2,929).

Bowling Proprietors Association of America Champions—*Singles,* Dick Weber, St. Louis; *doubles,* Dave Soutar, Detroit, and Tom Harnisch, Buffalo; *team,* Hamm's Beer, Chicago; Women: *singles,* Mrs. Ann Slattery, Salt Lake City; *doubles,* Janet Harman and Donna Zimmerman, Norwalk, Calif.; *team,* Gossard Girls, Chicago.

National Duckpin Bowling Congress Tournament—*Singles,* Norwood Heselbach, Baltimore (486); *doubles,* Frank Caruso and John Ferrando, Stratford, Conn. (901); *all events,* Al Grandy, Waterford, Conn. (1,323); *team,* Bowl America, Baltimore (2,104). Women: *singles,* Ruth King, Washington, D.C. (428); *doubles,* Patsy Stroessner and Betty Mooney, Baltimore (813); *all events,* Betty Powers, Richmond, Va. (1,190); *team:* Crestlanes Five, Lynchburg, Va. (1,840) *mixed doubles,* Betty Mooney and Earl Hartman, Baltimore (830); *mixed team:* Buddy's Horseshoe Club, Richmond, Va. (1,894)

Professional Bowlers Association Championship (Detroit)—Dave Davis, Phoenix Ariz. (681 final series)

BOXING

Boxing wound up 1965 with two heavyweight champions—one by popular acclaim, the other by edict.

The dual championships developed after the World Boxing Association (WBA) declared the title vacant in late 1964 because the reigning champion, Cassius Clay, had agreed to a return bout with the dethroned Sonny Liston. This was against the new rules, so the WBA decreed that the title would go to the winner of an elimination series among other high-ranked heavyweights. Ernest Terrell, of Chicago, outpointed Eddie Machen for the championship in New York on March 5.

On May 25, Clay and Liston went through with their bout, fighting in Lewiston, Me., because authorities banned the fight in Boston. Clay knocked out Liston in one minute of the 1st round with a punch that few viewers saw.

The reaction prompted the U.S. Senate to begin hearings to determine whether a federal boxing commission should be established. The hearings lasted many rounds and came to no decision. One state—Connecticut—banned boxing altogether.

In November both champions saw action. Terrell defeated George Chuvalo, of Toronto, in Chuvalo's home town on November 1. On November 22, Clay whipped two-time titleholder Floyd Patterson in Las Vegas in a bout that the referee stopped in the 12th round. The bout had been set up by the new president of the WBA, Jim Deskin, who was also Nevada's boxing commissioner and had sanctioned the fight in his latter capacity. WBA rules extend to all states except New York and Massachusetts. The fight was billed as a title bout, but afterward the WBA said it simply classed Clay as the No. 1 contender for Terrell's crown.

A title vacancy popped up in the flyweight class. Champion Salvatore Burruni, of Italy, who dethroned Pone Kingpetch, of Thailand, in April, was shorn of his title for failing to defend it. Burruni then knocked out Rocky Gattellari in Sydney on December 2.

In other classes, there was action and no debating. Welterweight Emile Griffith, the busiest and most successful champion, fought four bouts, two of them with his crown at stake. In title bouts he defeated José Stable and Manny Gonzalez, who had won a decision over Emile in a nontitle fight in January.

Lightweight Carlos Ortiz lost his crown in 1965 but got it back. Ortiz, beaten by Ismael Laguna, of Panama, in May, reversed the result in November. Dick Tiger, of Nigeria, battered Joey Giardello, of Cherry Hill, N.J., to regain the middleweight title that he had lost to Tiger in 1963, and José Torres, of New York, took the light heavyweight title away from Willie Pastrano of New Orleans. Eder Jofre, of Brazil, lost the bantam title to Masahiko (Fighting) Harada, of Japan. Vicente Saldiver, of Mexico, featherweight champion, successfully defended his title twice.

World Professional Champions

Heavyweight—Cassius Clay, Louisville
(World Boxing Association—Ernest Terrell, Chicago)
Light Heavyweight—José Torres, New York
Middleweight—Dick Tiger, Nigeria
Junior Middleweight—Nino Benvenuti, Italy
Welterweight—Emile Griffith, New York
Junior Welterweight—Carlos Hernandez, Venezuela
Lightweight—Carlos Ortiz, New York
Junior Lightweight—Flash Elorde, Philippines

Featherweight—Vicente Saldivar, Mexico
Bantamweight—Masahiko (Fighting) Harada, Japan
Flyweight—*Salvatore Burruni, Italy
*Title declared vacant by World Boxing Association in November

National AAU Senior Championships
(Maumee, Ohio, March 25–27)

112 Pounds—Sam Goss, Trenton, N.J.
119 Pounds—George Colon, New York City
125 Pounds—Lawrence Hines, Philadelphia
132 Pounds—Herb Dolloson, Washington
139 Pounds—Ray Garay, Houston
147 Pounds—Hedgeman Lewis, Detroit
156 Pounds—Conrad Williams, Homestead, Pa.
165 Pounds—George Cooper, Oakland, Calif.
178 Pounds—Roger Russell, Philadelphia
Heavyweight—Boone Kirkman, Seattle

BRIDGE, CONTRACT

World Team Championship (Buenos Aires, May 15–23)—Italy (Walter Avarelli, Giorgio Belladonna, Massimo D'Alelio, Pietro Forquet, Benito Garozzo, and Camillo Pabis Ticci, with Sergio Osella and Carl Alberto Perroux, nonplaying co-captains) defeated United States, Argentina, and Britain.

Spring Nationals
(Cleveland, March 12–21)

Harold S. Vanderbilt Cup Team—Oswald Jacoby and Dr. John Fisher, Dallas; Jim Jacoby, Richardson, Tex.; Albert Weiss, Chicago: Ira Rubin, Fair Lawn, N.J.; and Phil Feldesman, New York.
Men's Pairs—Lawrence Rosler, Murray Hill, N.J., and Jeff Rubens, New York
Women's Pairs—Mrs. John Gruver, Ellicott City, Md., and Mrs. David Sachs, College Park, Md.
Men's Teams—Harry J. Fishbein, Roger Stern, and Jeff Rubens, New York, and Charles J. Solomon, Philadelphia
Women's Teams—Jacqui Mitchell and Betty Kaplan, New York; Virginia Heckel, Chicago, and Edith Kemp, Miami Beach, Fla.
Mixed Pairs—Mr. and Mrs. Herbert Beyer, Lakeville, Mich.
Open Pairs—John Biddle and James Wisemiller, Columbus, Ohio
Individual—Baron Wolf Lebovic, Toronto

Summer Nationals
(Chicago, August 6–15)

Masters Mixed Teams—Mr. and Mrs. Tobias Stone, Waldemar von Zedtwitz, and Alvin Roth, New York, and Barbara Brier, Miami Beach, Fla.
Mixed Teams (second flight)—Mrs. Ida Bennett and Charles Coon, New York; Mrs. Stanley Smith, Detroit; Paul Hodge, Abilene, Tex.; Helen Portugal, Los Angeles; and Eric Murray, Toronto
Life Masters Pairs—Victor Mitchell and Sam Stayman, New York
Life Masters Pairs (flight B)—Muriel Levin and Delle Levinson, Skokie, Ill.
Masters Knockout Teams (Spingold)—Eric R. Murray, Sammy Kehela, and Percy Sheardown, Toronto, and C. Bruce Elliott, Weston, Ont.
Men's Pairs—David Cox, Michigan City, Ind., and Jack Mathis, Chicago
Women's Pairs—Mrs. Louise Mark, Toronto, and Mrs. Helen Utegaard, Bethesda, Md.

Fall Nationals
(San Francisco, November 19–28)

Board-a-Match Teams—Edwin Kantar, Los Angeles; Marshall Miles, San Bernadino, Calif.; Michael Lawrence, Berkeley, Calif.; and Lew Stansby, Oakland.
Blue Ribbon Pairs—Chuck Henke, Shelby, Mont., and John Moran, Pacifica, Calif.
Life Master Men's Pairs—Alex Tschekaloff and Paul Soloway, Los Angeles
Life Master Women's Pairs—Mrs. Tobias Stone, New York, and Ann Sheaber, Scarsdale, N.Y.
Mixed Pairs—Mr. and Mrs. Edgar Kaplan, New York

CHESS

Men's World—Tigran Petrosian, USSR (Boris Spassky, USSR, won the right to challenge Petrosian in 1966)
Women's World—Nona Gaprindashvili, USSR
U.S. Men—Robert J. Fischer, New York
U.S. Women—Gisela Kahn Gresser, New York
U.S. Men's Open—Pal Benko, New York, and William Lombardy, New York
U.S. Women's Open—Kathryn Slater, New York, and Mary Bain, New York
U.S. Men's Amateur—Frank Street, Washington
U.S. Women's Amateur—Eclesia Cestone, West Orange, N.J.

CROSS-COUNTRY

AAU (10,000 Meters)—Ron Larrieu, Los Angeles (31:11.8); *team:* Toronto Olympic Club (40 pts)
U.S. Track and Field Federation (6 miles)—John Lawson, Jayhawk Track Club (28:50); *team:* Jayhawk Track Club, Lawrence, Kans. (42 pts)
NCAA (6 miles)—John Lawson, Kansas (29:24); *team:* Western Michigan (81 pts); *college division:* Gene Takle, Luther (Iowa) (19:38.9); *team:* San Diego State (55 pts)
IC4-A (5 miles)—*University Division:* Eamon O'Reilly, Georgetown (24:24.2); team, Georgetown (59 pts). *College Division:* Jim O'Connell, City College of New York (25:26.3); *team:* St. Joseph's, Philadelphia (81 pts)
NAIA (4 miles)—Pat McMahon, Oklahoma Baptist (20:28.5); *team:* Fort Hays State (43 pts)

CURLING

Scotch Cup (World)—Superior, Wis. (Raymond Somerville, skip)
U.S. Men's C.A. Championship—Superior, Wis.
U.S. Women's C.A. Championship—Indian Hill C.C., Winnetka, Ill. (Mrs. John Bulger)
Canadian (Dominion C.A.) Championship—Winnipeg (Terry Braunstein)
Ardsley Medal (at Hastings-on-Hudson, N.Y.)—Montreal Caledonia (Gerry Boyd)
Calder Trophy (at Norfolk, Conn.)—Albany C.C. (P. Anderson)
Douglas Medal (at Hastings-on-Hudson)—Brae Burn (Bud Chandler)
Dykes Memorial Medal (at Brookline, Mass.)—Schenectady (R. M. Breault)
Governor's Bowl (at Albany, N.Y.)—Albany (Green Rand)
Granite State Trophy (at Nashua, N.H.)—Petersham (V.J. Purple)
Lord Elgin Trophy (at Montreal)—Montreal Caledonia (J. McCormick)
Mitchell Gold Medal (at Utica, N.Y.)—Utica (C.P. Raehm, Jr.)
Nutmeg Stone (at Darien, Conn.)—New York Caledonian (E.H. Slaybaugh)
Royal Victoria Jubilee (Trois Rivières, Que.)—Hudson C.C. (George Smart)
Stockton Cup (at Brookline, Mass.)—Royal Montreal C.C. (I. Ibbotson)
Wicks Trophy (at Hastings-on-Hudson)—Hamilton (Ont.) Thistles (Arthur Burns)
Winchester Bowl (at Winchester, Mass.)—Fredericton, New Brunswick (A.M. Limerick)

DOG SHOWS

Westminster Kennel Club Show (New York, February 15–16)—*best in show:* Scottish Terrier, Ch. Carmichael's Fanfare, owned by Mr. and Mrs. Charles Stalter, Woodcliff Lake, N.J. (2,573 dogs shown).
International Kennel Club Show (Chicago, April 3–4)—*best in show:* Doberman pinscher, Ch. Ru-Mar's Tsushima C.D., owned by Mrs. Margaret Carveth, Portola, Valley, Calif. (2,982 dogs shown).

FENCING

World Championships
(Paris, July 2–12)

Individual—*foil:* Jean-Claude Magnan, France: *épée:* Ferenc Nemere, Hungary; *saber:* Jerzy Pawlowski, Poland; *women's foil:* Galina Gorokhova, Russia.
Team—*foil:* Russia; *épée:* France; *saber:* Russia.

United States Championships
(Los Angeles, June 19–27)

Individual—*foil:* Robert Russell and Salle Santelli, New York; *épée:* Joe Elliott, Los Angeles; *saber:* Alex Orban, New York A.C.; *women's foil:* Mrs. Janice Romary, Salle Vince, Los Angeles.
Team—*foil:* Fencers Club of New York; *épée:* Salle Csizar, Philadelphia; *saber:* New York A.C.; *over-all:* New York A.C.; *women:* Salle Santelli, New York.

National Collegiate (NCAA) Championships
(Detroit, March 18–20)

Individual—*foil:* Joe Nalven, Columbia; *épée:* Paul Pesthy, Rutgers; *saber:* Howard Goodman, New York University
Team (3-weapon)—Columbia

FOOTBALL

Football, traditionally an autumn sport, played to jammed stadiums all over the country from August 1965 through the turn of the year. The early off-season clamor was for the professionals, who were so much in demand that they lengthened their exhibition program before regular-season play.

At the finish only one champion remained from the previous year—Buffalo of the American Football League. The Bills were not extended in retaining the championship of the Eastern Division, and in the title game they again routed the Western leader, San Diego, by a score of 23–0.

In the National Football League the defending Cleveland Browns breezed to the Eastern Conference championship but, mired in the mud at Green Bay, Wis., lost the league title to the Green Bay Packers, 23–12. In regaining the championship, Green Bay first had to get through a play-off with Baltimore for the Western Conference title. This they did on their home field, winning on a field goal by Don Chandler in an extra "sudden death" period, 13–10.

Meanwhile, the upheavals in college football began early as Alabama, Ohio State, UCLA, and Auburn lost their openers, and Notre Dame, Georgia Tech, and Syracuse came a cropper in their second games. By the end of the regular season only Arkansas, Michigan State, Nebraska, and Dartmouth remained unbeaten and untied among the major teams. Arkansas, with a string of 22 straight victories, cried for recognition as the nation's leading team. The National Football Foundation and United Press International polls, however, awarded this honor to Michigan State.

With the playing of the year-end bowl games, the undefeated list was cut to one—Dartmouth, which was prohibited by Ivy League rules from post-season activity. On Jan. 2, 1966, Louisiana State ended the Arkansas streak, 14–7, in the Cotton Bowl; UCLA jolted Michigan State, 14–12, in the Rose Bowl, reversing an early season result; Alabama outlasted Nebraska, 39–28, in an Orange Bowl scoring spree; and Missouri nipped Florida, 20–18, in the Sugar Bowl. These final upheavals raised Alabama to the No. 1 spot in the Associated Press poll.

The year wound up with the usual uproar as professional teams signed the college players for fantastic bonuses. Two new teams had to be stocked for 1966—the Atlanta Falcons in the NFL and the Miami Dolphins in the AFL.

Items of historic import were: (1) the kicking of six field goals in one game by Charlie Gogolak, of Princeton, bringing the collegiate record even with the pros; (2) the ending of a 43-game nonwinning string by Rensselaer Polytechnic Institute, which defeated Middlebury, 28–14, on October 23, but switched back to losing a week later; (3) the feats of the NFL rookie of the year, Gale Sayers, of the Chicago Bears, in breaking the league record for touchdowns with 22, one more than the great Jim Brown, of Cleveland, and in scoring six touchdowns in one game, equalling the mark set by Ernie Nevers, of the Chicago Cardinals, in 1929.

JIM BROWN, often called the greatest ball carrier in the history of football, collected additional honors in 1965 as he led the Cleveland Browns to the Eastern Conference championship of the National Football League. A United Press International poll named him as the league's player of the year, and Associated Press sports writers chose him as the league's most valuable player. A marked man because Cleveland relies on his running ability, Brown nevertheless won NFL rushing honors for the eighth time in nine seasons. The hard-driving fullback, standing 6 feet 2 inches and weighing 228 pounds, advanced 1,544 yards in 289 carries, and he scored 21 touchdowns.

James Nathaniel Brown was born in 1936 on St. Simons Island, off the Georgia coast. His family moved to Manhasset, N.Y., where he won places on all-state high school teams in football, basketball, and track. At Syracuse University, he led the Orangemen to the Lambert Trophy as the best Eastern team in 1956. He joined the Browns in 1957 as their No. 1 draft choice.

NATIONAL FOOTBALL LEAGUE
(Final Standings, 1965)

					Points	
	W	L	T	Pct.	For	Against
Eastern Conference						
Cleveland	11	3	0	.786	363	325
Dallas	7	7	0	.500	325	280
New York	7	7	0	.500	270	338
Washington	6	8	0	.429	257	301
Philadelphia	5	9	0	.357	363	359
St. Louis	5	9	0	.357	296	309
Pittsburgh	2	12	0	.143	202	397
Western Conference						
*Green Bay	10	3	1	.769	316	224
Baltimore	10	3	1	.769	389	284
Chicago	9	5	0	.643	409	275
San Francisco	7	6	1	.538	421	402
Minnesota	7	7	0	.500	383	403
Detroit	6	7	1	.462	257	295
Los Angeles	4	10	0	.286	269	328

* Defeated Baltimore, 13–10, for Conference championship, Dec. 26, at Green Bay, in "sudden death" fifth period

League Champions—Green Bay (defeated Cleveland 23–12 at Green Bay, Jan. 2, 1966)

AMERICAN FOOTBALL LEAGUE
(Final Standings, 1965)

					Points	
	W	L	T	Pct.	For	Against
Eastern Division						
Buffalo	10	3	1	.769	313	226
New York	5	8	1	.385	285	303
Boston	4	8	2	.333	244	302
Houston	4	10	0	.286	298	429
Western Division						
San Diego	9	2	3	.818	340	227
Oakland	8	5	1	.615	298	239
Kansas City	7	5	2	.583	322	285
Denver	4	10	0	.286	303	392

League Champions—Buffalo (defeated San Diego 23–0 at San Diego, Dec. 26)

Intercollegiate and Conference Champions

National (AP and UP)—Michigan State
National (MacArthur Bowl)—Michigan State
Eastern (Lambert Trophy)—Dartmouth
Eastern Small College (Lambert Cup)—Maine
Atlantic Coast—Duke and South Carolina (4–2)
Athletic Association of Western Universities—UCLA (4–0)
Big Eight—Nebraska (7–0)
Big Ten—Michigan State (7–0)
Central Intercollegiate AA–Morgan State (8–0)
Ivy League—Dartmouth (7–0)
Mid-American—Bowling Green and Miami (5–1)
Mid-Atlantic (University)—Bucknell (5–1)
Mid-Atlantic (College, North)—Wilkes (6–1)
Mid-Atlantic (College, South)—Swarthmore (6–0)
Missouri Valley—Tulsa (4–0)
Ohio Valley—Middle Tennessee (7–0)
Southeastern—Alabama (6–1–1)
Southern—West Virginia (4–0)
Southwestern—Arkansas (7–0)
Western Athletic—Brigham Young (4–1)
Yankee—Maine (5–0)
NAIA Championship Bowl (Augusta, Ga., Dec. 11)—St. John's (Minn.) 33, Linfield (Ore.) 0

NCAA Regional Bowls

Tangerine (Atlantic Coast, at Orlando, Fla., Dec. 11)—East Carolina 31, Maine 0
Grantland Rice (Mideast at Murfreesboro, Tenn., Dec. 11)—Tennessee State 14, Ball State 14
Pecan (Midwest at Abilene, Tex., Dec. 11)—North Dakota State 20, Grambling 7
Camellia (Pacific Coast at Sacramento, Calif., Dec. 11)—Los Angeles State 18, University of California at Santa Barbara 10

Major Bowl and All-Star Games—
December 1965, January 1966

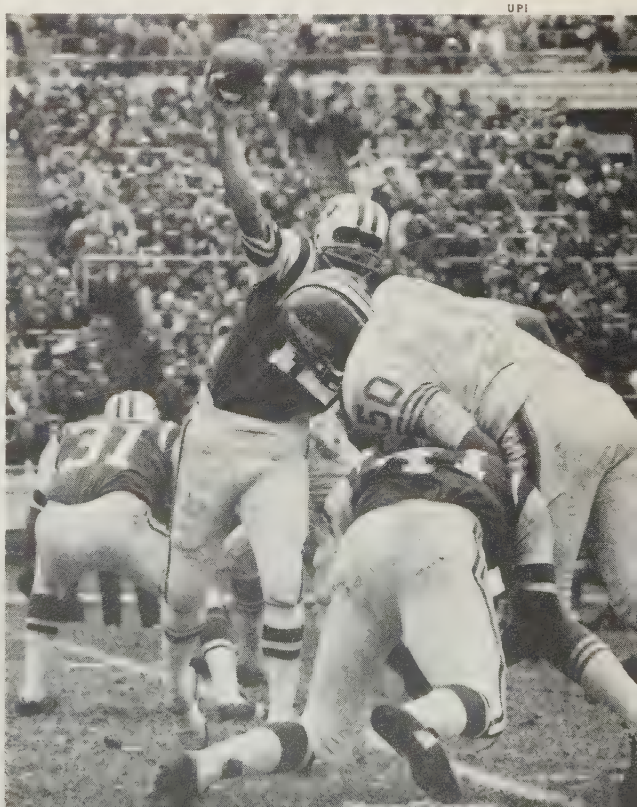
Bluebonnet (Houston, Dec. 18, 1965)—Tennessee 27, Tulsa 6
Liberty (Memphis, Dec. 18, 1965)—Mississippi 13, Auburn 7

UPI

PROFESSIONAL FOOTBALL GREAT, Jim Brown (No. 32) of Cleveland Browns, carries ball and tackler for five-yard gain in Pro-Bowl Game in Los Angeles, Jan. 16, 1966.

QUARTERBACK JOE NAMATH (shown passing), who signed a record $400,000 contract with the New York Jets, was named 1965 American Football League Rookie of the Year.

UPI



Blue-Gray All-Star (Montgomery, Ala., Dec. 25, 1965)—Gray 23, Blue 19
Shrine North-South All-Star (Miami, Dec. 25, 1965)—South 21, North 14
Gator (Jacksonville, Fla., Dec. 31, 1965)—Georgia Tech 31, Texas Tech 21
Shrine East-West All-Star (San Francisco, Dec. 31, 1965)—West 22, East 7
Sun (El Paso, Dec. 31, 1965)—Texas Western 13, Texas Christian 12
Cotton (Dallas, Jan. 1, 1966)—Louisiana State 14, Arkansas 7
Orange (Miami, Jan. 1, 1966)—Alabama 39, Nebraska 28
Rose (Pasadena, Calif., Jan. 1, 1966)—UCLA 14, Michigan State 12
Sugar (New Orleans, Jan. 1, 1966)—Missouri 20, Florida 18
Hula (Honolulu, Jan. 7, 1966)—North 27, South 26
Senior (Mobile, Ala., Jan. 8, 1966)—South 27, North 18
NFL Play-Off (Miami, Jan. 9, 1966)—Baltimore Colts 35, Dallas Cowboys 3
AFL Star Bowl (Houston, Jan. 15, 1966)—Stars 30, Buffalo Bills 19
NFL Pro Bowl (Los Angeles, Jan. 16, 1966)—East 36, West 7

GOLF

Although Jack Nicklaus, the portly gentleman from Columbus, Ohio, broke his own record for earnings, 1965 was a rough year for American golfers. They lost two international trophies, had to share a third, and even saw their National Open championship go to a foreigner for the first time since 1920.

Gary Player, of South Africa, became the National Open champion, defeating Kel Nagle, of Australia, by three strokes in an 18-hole playoff. He was so elated that he gave his winnings of $26,000 to charity and his caddy. The 5-foot, 7-inch golfer is the third man ever to win the world's four main pro titles. Only Gene Sarazen and Ben Hogan previously had taken the U.S. and British Opens, the Masters, and the Professional Golfers' Association (PGA) during their careers.

GARY PLAYER, the South African golfer who won the 1965 U.S. Open championship, contributes showmanship for the galleries as well as shotmaking skill. He imparted an unusual additional touch of drama when, after winning the U.S. Open, he gave $20,000 to promote junior golf in the United States and $5,000 to assist cancer research. "I am doing this because I am so indebted to this country for the privileges given me in golf," he explained.

Born in Johannesburg on Nov. 1, 1935, Player turned professional at 17. Two years later, he was skillful enough to earn his expenses on a tour of English tournaments. Instructed by South Africa's great Bobby Locke and also by Ben Hogan, Player improved swiftly. By 1959 he had become the youngest winner of the British Open in 91 years; in 1960 he became a leading money-winner in the U.S.; and in 1961 he added the Masters to his laurels. His 1965 earnings included $50,000 for winning the World Series of golf.

The 29-year-old South African and Arnold Palmer, who had a disappointing year, tied for second behind Nicklaus in the Masters. But in September, in the World Series of Golf—limited to the year's winners of the world's four major golf titles—Player defeated Nicklaus; Peter Thomson, of Australia, the British Open champion; and Dave Marr, the PGA titleholder. Player also beat out Nicklaus for the individual honors in the Canada Cup competition and bested Thomson for the Piccadilly world match title.

Nicklaus piled up total earnings of $167,246. Dave Marr, however, was voted PGA player of the year, and Billy Casper won the Vardon Trophy for his low average of 70.586 strokes per round. Kathy Whitworth took the Vare Trophy with a 72.61 average.

In International cup competition, South Africa (Player and Harold Henning) won the Canada Cup. Canada took the America's Cup for the first time, and the British gained a tie with the American amateurs for the Walker Cup. The U.S. pros, however, retained the Ryder Cup.

The U.S. amateur championships went to Robert J. Murphy, of Nichols, Fla., playing in his first tourney, and Jean Ashley, a Chanute, Kans., elementary schoolteacher. Carol Mann took the women's National Open. Twenty-one-year-old Arne Dokka, of Studio City, Calif., won the U.S. Public Links title.

Men's Individual Champions

U.S. Open—Gary Player, South Africa
U.S. Amateur—Robert J. Murphy, Nichols, Fla.
PGA—Dave Marr, Larchmont, N.Y.
Masters—Jack Nicklaus, Columbus, Ohio
U.S. Public Links—Arne Dokka, Studio City, Calif.
British Open—Peter Thomson, Australia
British Amateur—Michael Bonallack, England
Canadian Open—Gene Littler, San Diego, Calif.
Canadian Amateur—George Henry, Valdosta, Ga.
Canadian PGA—Wilf Homenuik, Winnipeg
French Open—Ramon Sota, Spain
French Amateur—Gaetan Morgue d'Algue, France
Eastern Amateur—George Boutell, Phoenix, Ariz.
North-South Amateur—Tom Draper, Birmingham, Mich.
Southern Amateur—Billy Joe Patton, Morgantown, N.C.
Trans-Mississippi—George Boutell
Western Amateur—Bob Smith, Sacramento, Calif.
U.S. Senior—Fred Brand, Pittsburgh, Pa.
USGA Senior—Robert B. Kiersky, Oakmont, Pa.
World Senior Amateur—Jack Barkel, Australia
American Classic—Al Geiberger, Santa Barbara, Calif.
Carling World Open—Tony Lema, San Leandro, Calif.
National Challenge—Gary Player
Thunderbird Classic—Jack Nicklaus
Tournament of Champions—Arnold Palmer, Latrobe, Pa.
Western Open—Billy Casper, Bonita, Calif.
World Match Play—Gary Player
World Series—Gary Player
National Senior Open—Chandler Harper
PGA Senior—Sam Snead
World Senior—Sam Snead
NCAA—Marty Fleckman, Houston; college division: Larry Gilbert, Middle Tennessee

UPI

PROFESSIONAL GOLFERS Gary Player (l.) and Jack Nicklaus (r.), playing in the World Series of Golf in Akron, Ohio, Sept. 12, 1965, concentrate on "reading" the green. Player, winner of 1965 U.S. Open, also took first place and $50,000 in this tournament, and 1965 Masters winner Nicklaus took second place.

Women's Individual Champions

U.S. Open—Carol Mann, Towson, Md.
U.S. Amateur—Jean Ashley, Chanute, Kans.
LPGA—Sandra Haynie, Fort Worth, Tex.
British Amateur—Brigitte Varangot, France
Canadian Open Amateur—Jocelyn Bourassa, Quebec
Eastern Amateur—Nancy Roth Syms, Hollywood, Fla.
North-South Amateur—Barbara McIntire, Colorado Springs
Southern Amateur—Phyllis (Tish) Preuss, Pompano Beach, Fla.
Trans-Mississippi—Sharon Miller, Battle Creek, Mich.
Western Amateur—Barbara Fay White, Shreveport, La.
U.S. Senior—Mrs. Allison Choate, Rye, N.Y.
USGA Senior—Mrs. Hulet P. Smith, Pebble Beach, Calif.
North-South Senior—Mrs. Reinert M. Torgerson, Forest Hills, N.Y.
National Intercollegiate—Roberta Albers, Miami (Fla.) University

Team Champions

America's Cup (amateur)—Canada 22, United States 19½, Mexico 12½
Canada Cup (professional)—South Africa 571, Spain 579, United States 582, Canada and England 585; (high individual, Gary Player 281)
Ryder Cup (professional)—United States 19½, Britain 12½
Walker Cup (amateur)—United States 11, Britain 11 (tie)

Intercollegiate Team Champions

NCAA—Houston
NAIA—East Texas State
College Conference—*Athletic Association of Western Universities:* Southern California; *Atlantic Coast:* North Carolina; *Big Eight:* Oklahoma State; *Big Ten:* Purdue; *Central Intercollegiate AA:* Winston-Salem State; *Ivy:* Yale; *Mid-American:* Ohio University; *Mid-Atlantic:* Dickinson; *Missouri Valley:* North Texas; *Southeastern:* Georgia; *Southern:* Virginia Tech; *Southwestern:* Texas; *Western:* New Mexico; *Yankee:* Rhode Island

GYMNASTICS

National AAU Championships

(Lakewood, Ohio, July 1–3)

Men

All-Around—Makoto Sakamoto, Los Angeles (112.60 pts)
Floor Exercises—Makoto Sakamoto (18.75)
Parallel Bars—Makoto Sakamoto (18.85)
Horizontal Bars—Makoto Sakamoto (19.25)
Side Horse—Makoto Sakamoto (18.60)
Long Horse Vault—Makoto Sakamoto (19.125)
Rings—Makoto Sakamoto (18.825)
Tumbling—Kean Day, Southern Louisiana U. Gym Club (7.65)
Trampoline—Jim Younge, Southern Louisiana Univ. Gym Club (9.5)

Women

All-Around—Doris Fuchs Brause, New Haven, Conn. (71.2)
Floor Exercises—Dale McClements, Seattle Y (18.31)
Balance Beam—Marie Walther, Lakewood, Ohio (17.666)
Side Horse Vault—Doris Fuchs Brause (19.016)
Uneven Parallel Bars—Linda Metheny, McKinley Y, Chicago
Tumbling—Barbara Gallaher, New Haven, Conn. (8.9)
Trampoline—Beverly Averyt, Crenshaw A. C., Austin, Tex. (9.3)
Team—Southern Connecticut Gym Club (48.5 pts)

National Collegiate (NCAA) Championships

(Carbondale, Ill., April 2–3)

All-Around—Mike Jacobson, Penn State
Free Exercise—Frank Schmitz, Southern Illinois
Side Horse—Bob Elsinger, Springfield
Long Horse—Dan Millman, California
Trampoline—Frank Schmitz
Horizontal Bar—Jim Curzi, Michigan State, and Mike Jacobson
Parallel Bars—Jim Curzi
Still Rings—Glenn Gailis, Iowa
Team Championship—Penn State defeated Washington, 68½ to 51½

HANDBALL

United States Handball Association

4-Wall—*Singles:* Jimmy Jacobs, New York; *doubles:* Jimmy Jacobs and Marty Decatur, New York; *masters doubles:* Ken Schneider and Gus Lewis, Chicago
3-Wall—*Singles:* Carl Obert, New York; *doubles:* Oscar and Ruby Obert, New York; *masters doubles:* Ken Schneider and Gus Lewis
1-Wall—*Singles:* Oscar Obert; *doubles:* Ken Holmes, Brooklyn, and Walt Ulbrich, New York; *masters doubles:* Herb Dayboch and Al Goldstein, Brooklyn

AAU National Championships

4-Wall—*Singles:* Pat Kirby, New York; *doubles:* Ruby and Carl Obert; *masters doubles:* Vic Hershkowitz and Sam Costa, Brooklyn
1-Wall—*Singles:* Ken Davidoff, Brooklyn; *doubles:* Howie Eisenberg and Dave Norvid, Brooklyn.

YMCA National Championships

4-Wall—*Singles:* Dr. Jan Scopis, Detroit; *doubles:* Floyd Olson and Bob Perez, Chicago

National Intercollegiate

4-Wall—*Singles:* Bob Lindsay, Texas; *doubles:* Matt Kelly and Glen Dorverk, Texas; *team:* Texas

HARNESS RACING

Bret Hanover, who gained the 1964 Harness Horse of the Year title as a precocious two-year-old pacer, won almost everything he attempted in 1965. His victories included the triple crown of pacing and renewal of his horse of the year title almost by acclamation.

The colt, owned by Richard Downing of Shaker Heights, Ohio, and affectionately dubbed "Big Bum" by his driver-trainer, Frank Ervin, was not perfect, however. He lost three times to Adios Vic on a mile track. But on half-mile tracks, he was unbeatable and had run up a string of 35 victories (24 as a 2-year-old) before he was defeated in a heat at Springfield, Ill., in August. Bret won the next heat and the race. Adios Vic nailed him in the Horseman Futurity at Indianapolis even though Bret had equaled the world record of 1:55 for the mile in winning the first heat. Adios won the next two heats and for the first time Bret had lost a race.

Bret won the Cane Futurity at Yonkers and the Little Brown Jug at Delaware, Ohio, before he took the Messenger Stakes at Roosevelt Raceway in November to complete the triple crown. The only other pacer to achieve the triple crown was Adios Butler in 1959. In two years, Bret had won 45 of 48 starts and $514,274.

Armbro Flight, owned by the Armstrong Brothers of Brampton, Ont., became the three-year-old trotting champion as the result of late-season victories, and was ranked second to Bret Hanover among standardbreds. The 16.3-hand filly won the Dexter Cup and the Kentucky Futurity (the latter race is the third part of the triple crown). Trotting's triple crown was divided three ways, for Egyptian Candor captured the Hambletonian, and Noble Victory won the Yonkers Futurity. Race Time, rated third in the harness horse of the year contest, completed an unusual triple by being named best pacer of the year; in the previous two years he had been named best pacer as a two-year-old and as a three-year-old.

In winning the two-year-old trotter championship, Kerry Way set a record for juvenile fillies by taking in $116,549. Romeo Hanover, the leading two-year-old pacer, was even more rewarding to his owners; the little colt cost only $8,500, and he won $146,947.

U.S. Trotting Association Champions

Trotters

2-Year-Old—Kerry Way
3-Year-Old—Armbro Flight
Aged—Dartmouth

Pacers

2-Year-Old—Romeo Hanover
3-Year-Old—Bret Hanover
Aged—Cardigan Bay and Race Time

Harness Horse of the Year

Bret Hanover (1,663 pts); Armbro Flight (474); Race Time (204)

Major Stakes Winners

Trotting

American Classic—Armbro Flight
American National—Dartmouth
Dexter Cup—Armbro Flight
Hambletonian—Egyptian Candor
HTA Series Final—Dartmouth
Harriman—*First Division:* Governor Armbro; *Second Division:* Bonus Boy
Hilltop—Dartmouth
Kentucky Futurity—Armbro Flight
Realization—Dartmouth
Roosevelt International—Pluvier II, Sweden
Transoceanic—Elaine Rodney, Italy
United Nations—Speedy Rodney
Westbury Futurity—Kerry Way
Yonkers Futurity—Noble Victory

Pacing

American Classic—Cardigan Bay
American National—Race Time
Cane Futurity—Bret Hanover
Empire—Race Time
Fox—Romeo Hanover
Good Time—Bengazi Hanover
HTA Series Final—Race Time
Little Brown Jug—Bret Hanover
Messenger—Bret Hanover
National Championship—Irish Napoleon
National Derby—Cardigan Bay
Realization—Race Time
Reynolds—Bret Hanover
Sheppard—Romeo Hanover
Roosevelt Futurity—Romeo Hanover
Yonkers International—Smoke Cloud, New Zealand
Horseman Futurity—Adios Vic

HOCKEY

Three players—a fine rookie goalie, Roger Crozier; a 10-year player enjoying his best season, Norm Ullman; and the great Gordie Howe—led the Detroit Red Wings to the National League championship in the biggest surprise of the hockey season.

With Crozier guarding the nets and center Ullman leading the league in goals by scoring 42, the Red Wings won their first title since 1957. However, they were eliminated in the semifinals of the championship play-offs by the Chicago Black Hawks, and the Stanley Cup wound up with the Montreal Canadiens. To win the final round, the Canadiens were forced to go a full seven grueling games against the Black Hawks.

Boasting an average increase in attendance of 715 per game, the National Hockey League used the 1965 off-season to begin expansion. In June, St. Louis and Los Angeles were approved as sites for a second six-team division. San Francisco-Oakland and Vancouver were added in October to the new circuit, which is scheduled to begin operations in 1967.

Detroit opened the season briskly, jumping into first place and holding it for five weeks. Then the Red Wings dropped back to fourth place—the spot consigned them in early forecasts. With Bobby Hull and Stan Mikita staging scoring rampages, the Black Hawks hit an undefeated streak of 13 games (11 victories, 2 ties) and raced to the top in January.

UPI

TWO OF HOCKEY'S FINEST PLAYERS, Bobby Hull (l.), Chicago Black Hawks, and Gordie Howe, Detroit Red Wings, scramble for puck in game at Chicago on March 3. Their teams tied in this game, but the Red Wings later won the league championship.

BOBBY HULL, muscular left wing of the Chicago Black Hawks, skated off with the Hart Memorial Trophy and $1,250 as the most valuable player in the National Hockey League in the 1964–65 season. The 27-year old Hull also received the Lady Byng Memorial Trophy and $1,000 as the player who "exhibited the best type of sportsmanship and gentlemanly conduct combined with a high standard of playing ability." A brawny 193-pounder who avoids fights on the ice, Hull bears down hard on the fundamentals of his craft. He scored 39 goals during the season, second only to the 42 tallied by Norm Ullman of the Detroit Red Wings. Hull is the league's hardest shooter, firing the puck at the net at 118 mph, and also its fastest skater, being able to attain a top speed of 29 mph.

A native of Point Anne, Ont., Hull is a veteran of nine years' league competition. In 1965 he became the Hawks' foremost career pointmaker by lifting his total of goals and assists above 550. He shares the NHL season record of 50 goals.

But Hull suffered knee injuries, missed seven games, and lost his scoring touch, and the Hawks fell behind.

Montreal, getting consistent play from all its lines, was always in contention for the title but was left in second place when the Wings put on a final burst to win 14 consecutive victories on their home ice.

Bobby Hull won two awards—the Hart Trophy for the most valuable player and the Lady Byng Trophy for sportsmanship. Crozier took the Calder Trophy for the best rookie; Mikita, the Art Ross Trophy as the leading scorer; and Pierre Pilote, of Chicago, the James Norris Trophy for the best defenseman. Terry Sawchuk and Johnny Bower, of Toronto, shared the Vezina Trophy awarded the goalies scored upon least.

Howe, third to Mikita and Ullman in season scoring and the holder of all NHL scoring records, netted his 600th regular-season goal in November.

The sputtering New York Rangers fired coach Red Sullivan in December, and general manager Emile Francis took over.

NATIONAL HOCKEY LEAGUE

(Final Standings, 1965)

Team	Won	Lost	Tied	Goals For	Goals Against	Points
Detroit	40	23	7	224	175	87
Montreal	36	23	11	211	185	83
Chicago	34	28	8	224	176	76
Toronto	30	26	14	204	173	74
New York	20	38	12	179	246	52
Boston	21	43	6	166	253	48

Stanley Cup Play-Offs

Semi-finals—Chicago defeated Detroit, 4 games to 3; Montreal defeated Toronto, 4 games to 2
Final—Montreal defeated Chicago, 4 games to 3

Individual National Hockey League Awards

Hart Trophy (most valuable player)—Bobby Hull, Chicago
Ross Trophy (leading scorer)—Stan Mikita, Chicago
Vezina Trophy (fewest goals scored against)—Johnny Bower and Terry Sawchuk, Toronto goalkeepers.
Norris Trophy (leading defenseman)—Pierre Pilote, Chicago
Lady Byng Trophy (sportsmanship)—Bobby Hull, Chicago
Calder Trophy (outstanding rookie)—Roger Crozier, Detroit

Other Professional Champions

American Hockey League—*Eastern Division:* Quebec; *Western Division* and *Calder Cup play-offs:* Rochester
Western Hockey League—*Regular season* and *play-offs:* Portland
Central League—*Regular season* and *play-offs:* St. Paul

Amateur Champions

World—Russia
International League—*Regular season:* Port Huron; *play-offs:* Fort Wayne
Eastern League—*Northern Division:* Clinton; *Southern Division:* Nashville; *play-offs:* Long Island
Amateur Hockey Association of the U.S.—*Senior:* Green Bay, Wis.; *Intermediate:* St. Paul Como; *junior:* not held; *juvenile:* Soo (Mich.) Veterans of Foreign Wars; *Midget:* Soo Elks; *bantam:* Detroit Milner; *peewee:* Duluth

Canadian

Allan Cup (senior)—Sherbrooke Beavers
Memorial Cup (junior)—Niagara Falls Flyers

United States Intercollegiate

NCAA—Michigan Tech (defeated Boston College in final, 8–2)
ECAC—Boston College (defeated Brown in final, 6-2)
Ivy League—Brown (8–2–0)

HORSE RACING

A big, two-year-old chestnut filly, Moccasin, charged to the top in a confused racing season in which some of the best horses had trouble getting to the starting gate. Unbeaten Moccasin, owned by Arthur B. Hancock and W. Haggin Perry, took the horse of the year honors away from Kelso, champion for the preceding five seasons, by one vote in the Thoroughbred Racing Association poll. In third place was Roman Brother, handicap horse of the year, and in fourth, Tom Rolfe, the leading three-year-old colt. In a *Morning Telegraph* vote, Roman Brother edged Tom Rolfe for the top honor by one vote, and Moccasin and Kelso tied for a distant fourth, behind Buckpasser.

Moccasin won all eight of her races and wound up the season with smashing victories in the Gardenia at Garden State, the Matron at Aqueduct, and the Selima at Laurel. She did not begin her season until August at Saratoga and yet won $319,731.

The vote for Kelso was mainly sentimental. The old campaigner also started the season late. Mrs. Richard du Ponts' eight-year-old gelding won the Whitney at Saratoga and the Stymie at Aqueduct, and was well on his way toward becoming the first horse to win $2 million when an eye infection forced him out of action in the fall. Kelso boosted his record winnings to $1,997,396.

Among other horses withdrawn from competition for injuries were the 1964 juvenile leaders—Bold Lad, Sadair, and Queen Empress—along with Gun Bow and Quadrangle.

Roman Brother, with Kelso out of action, took the big handicap tests—the Woodward, Manhattan, and Jockey Club Gold Cup.

Tom Rolfe was syndicated for about $1.6 million by his owner, Raymond Guest, who retained 10 shares. The son of Ribot was out of the money only once in 13 starts and made the best showing in triple crown events. He ran third in the Kentucky Derby (won by Lucky Debonair), won the Preakness, and was a nose behind Hail to All in the Belmont.

Bon Nouvel climaxed a successful bid for steeplechase honors by winning the Temple Gwathmey Handicap by 30 lengths while carrying a fantastically heavy 170 pounds.

Thoroughbred Racing Association Champions

American Champion—Moccasin
Older Horse—Roman Brother
Older Filly or Mare—Old Hat
3-Year-Old Colt—Tom Rolfe
3-Year-Old Filly—What a Treat
2-Year-Old Colt—Buckpasser
2-Year-Old Filly—Moccasin
Steeplechase—Bon Nouvel

Stakes Winners

American Derby (Arlington)—Tom Rolfe
American Handicap (Hollywood)—Native Diver
Aqueduct Futurity—Priceless Gem
Aqueduct Stakes—Malicious
Arlington Classic—Tom Rolfe
Arlington Lassie—Silver Bright
Arlington Matron—Old Hat
Arlington-Washington Park Futurity—Buckpasser
Beldame (Aqueduct)—What a Treat
Belmont Stakes (Aqueduct)—Hail to All
Brook Steeplechase Handicap—Bon Nouvel
Brooklyn Handicap (Aqueduct)—Pia Star
Californian (Hollywood)—Viking Spirit
Champagne Stakes (Aqueduct)—Buckpasser
Chicagoan (Arlington)—Tom Rolfe
Coaching Club American Oaks (Aqueduct)—Marshua
Delaware Handicap—Steeple Jill
Delaware Oaks—Juanita
Flamingo (Hialeah)—Native Charger
Florida Derby (Gulfstream)—Native Charger
Frizette (Aqueduct)—Priceless Gem
Garden State Stakes—Prince Saim
Gardenia (Garden State)—Moccasin
Governor's Gold Cup (Bowie)—Isle of Greece
Grand National Steeplechase (Aqueduct)—Mako
Gulfstream Handicap—Ampose
Hawthorne Gold Cup—Moss Vale
Hialeah Turf Cup—Hot Dust
Hollywood Derby—Terry's Secret
Hollywood Gold Cup—Native Diver
Hollywood Juvenile—Port Wine
Hollywood Lassie—Premise
Hopeful (Saratoga)—Buckpasser
Jersey Derby (Garden State)—Hail to All
Jockey Club Gold Cup (Aqueduct)—Roman Brother
John B. Campbell Memorial Handicap (Bowie)—Lt. Stevens
Kentucky Derby—Lucky Debonair
Man o' War Handicap (Aqueduct)—Hill Rise
Massachusetts Handicap (Suffolk Downs)—Smart
Matron (Aqueduct)—Moccasin
Metropolitan Handicap (Aqueduct)—Gun Bow
Monmouth Handicap—Repeating
Mother Goose Stakes (Aqueduct)—Cordially
New Hampshire Sweepstakes—Pass the Word
New Orleans Handicap (Fair Grounds)—Valiant Man
Pimlico Futurity—Spring Double
Preakness (Pimlico)—Tom Rolfe
San Juan Capistrano (Santa Anita)—George Royal
Santa Anita Derby—Lucky Debonair
Santa Anita Handicap—Hill Rise
Sapling (Monmouth)—Buckpasser
Saratoga National Hurdles—Natty Bumppo
Sorority (Monmouth)—Native Street
Selima (Laurel)—Moccasin
Strub (Santa Anita)—Duel
Suburban Handicap (Aqueduct)—Pia Star
Temple Gwathmey Steeplechase (Aqueduct)—Bon Nouvel
Travers (Saratoga)—Hail to All
United Nations Handicap (Atlantic City)—Parka
Washington D.C. International (Laurel)—Diatome (France)
Washington Park Handicap—Take Over
Whitney (Saratoga)—Kelso
Widener (Hialeah)—Primordial
Wood Memorial (Aqueduct)—Flag Raiser
Woodward Stakes (Aqueduct)—Roman Brother

Foreign Races

Champions—*Canadian:* Royal George; *English:* Sea Bird
Cambridgeshire (Newmarket)—Tarqogan
Canadian Championship—Royal George
Canadian Derby—Chariot Chaser
Epsom Derby—Sea Bird
Epsom Oaks—Long Look
Grand National Steeplechase (Britain)—Jay Trump
King George VI and Queen Elizabeth—Meadow Court
Irish Derby—Meadow Court
Melbourne Cup—Light Fingers
Prix de l'Arc de Triomphe—Sea Bird
Queen's Plate (Canada)—Whistling Sea
St. Leger (England)—Provoke

HORSE SHOWS

American Horse Show Association

High-Score Winners

Arabian—F. Burr Betts' Witezar, Parker, Colo.
Hackney Pony—Mrs. Victoria Armstrong's Croftland's Dainty Doris, Brampton, Ont.
Harness Pony—Mrs. Victoria Armstrong's Mr. Sandman
Green Conformation Hunter—Mr. and Mrs. John H. Leib's Model Cadet, Glen Head, N.Y.
Conformation Hunter—Mr. and Mrs. A. E. Cunningham's Cap and Gown, Warrenton, Va.
Green Working Hunter—Lisa Joy Rosen's Mid Flight, Dedham, Mass.
Working Hunter—Cismont Manor Farm's Isgilde, Keswick, Va.
Amateur-Owner Hunter—Robert L. Chamberlain III's Lea's Boots, New Canaan, Conn.
Junior Hunter—Beverly Huber's Take the Field, Hatboro, Pa.
Junior Jumper—Dick Clayton's Sandstorm, St. Louis
Small Hunter Pony—Susan W. Burr's Wizard of Oz, Kimberton, Pa.
Large Hunter Pony—Susan Blaisdell's Highfield's Tulip, Red Bank, N.J.
Green Jumper—Cheeca Farm's Good Twist, Holmdel, N.J.
Open Jumper—Danny Lopez' Australis, Old Brookville, N.Y.
Morgan—Camelot Farms' Ermine, Fort Lauderdale, Fla.
Palomino Pleasure—Rollin C. Smith's Tony's Dusty, Syracuse, N.Y.
Parade—Mr. and Mrs. Daniel E. Cohn's Charlemagne, Beverly Hills, Calif.
Roadster—William Gill, Jr.'s Night Flight, Oklahoma City
Open 3-Gaited Saddle—Castleton Farm's Local Talent, Lexington, Ky.
Amateur 3-Gaited Saddle—A.C. Huffman's Emerald Victory, Ridgewood, N.J.
Open 5-Gaited Saddle—Jolie Richardson's My My, Atlanta
Amateur 5-Gaited Saddle—Mr. and Mrs. Harold C. Stuart's Legal Tender, Tulsa
Open Fine Harness—Metropolitan Stables' Thunderbird, Oklahoma City
Amateur Fine Harness—Metropolitan Stables' The Cock Robin
Junior Exhibitors' 3-Gaited Saddle—Candy Miksch's Holiday's Pride, Bernardsville, N.Y.
Shetland Pony—Mrs. P.C. Whitlock's Ponyland's Globetrotter, Covington, Va.
Tennessee Walking—Courtesy Chevrolet's Go Boy's Ballerina C., Los Angeles
Welsh Pleasure Pony—Mrs. J.A. duPont's Coed Coch Seren Lwyd, Newtown Square, Pa.
Stock—Glen A. Fox' Poco Lonnie, Santa Susana, Calif.
Trail—Leslie and Marcia Blumer's Taffy, Orinda, Calif.
Western Pleasure—Shelley Hughes' Picnica, Visalia, Calif.

National Horse Show Equestrian Championships

(Madison Square Garden, N.Y., October 30–31)

AHSA Saddle Seat—Edward Lumia, Croton-on-Hudson, N.Y.
AHSA Hunter Seat—Crystine Jones, Bloomfield, Mich.
NHS (Good Hands) Award—Edward Lumia
ASPCA (Maclay) Award—Crystine Jones

International Jumping Championships

Penn National (Harrisburg)—*team:* United States; *individual:* Kathy Kusner
National Horse Show (Madison Square Garden)—*team:* United States; *individual:* Bill Steinkraus
Royal Winter Fair (Toronto)—*team:* United States; *individual:* Frank Chapot

ICE SKATING

Figure Skating

World Championships

(Colorado Springs, Colo., March 2–6)

Men—Alain Calmat, France
Ladies'—Petra Burka, Toronto
Pairs—Ljudmila Belousova and Oleg Protopopov, USSR
Dance—Eva Romanova and Pavel Roman, Czechoslovakia

United States Championships

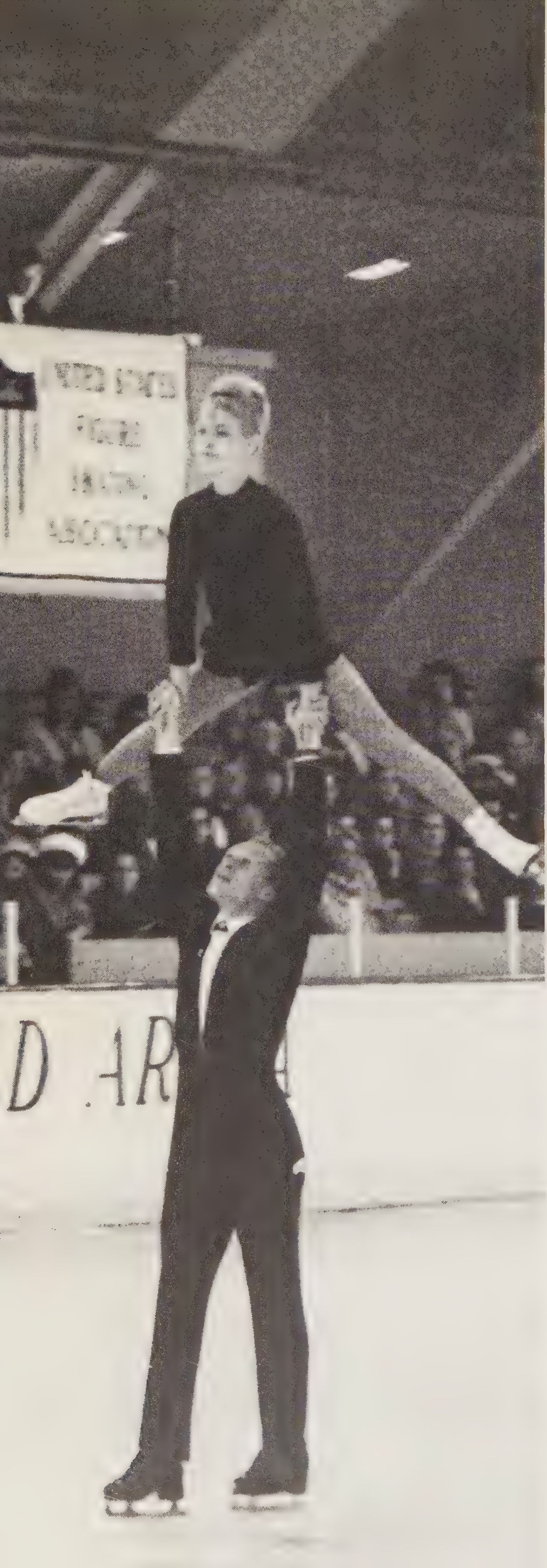
(Lake Placid, N.Y., February 10–13)

Men's Senior—Gary Visconti, Detroit
Ladies' Senior—Peggy Fleming, Pasadena, Calif.
Senior Pairs—Vivian and Ronald Joseph, Highland Park, Ill.
Dance (Gold)—Kristin Fortune, Hollywood, Calif., and Dennis Sveum, Sun Valley, Calif.

North American Championships

(Rochester, N.Y., Feb. 19–21)

Men's Senior—Gary Visconti
Ladies' Senior—Petra Burka


1965 WORLD FIGURE-SKATING CHAMPIONS, Russian husband and wife team Oleg Protopopov and Ljudmila Belousova win pairs title at Colorado Springs on March 5.

UPI

Senior Pairs—Vivian and Ronald Joseph
Dance—Lorna Dyer and John Carrell, Seattle

Speed Skating

World Championships—Men
(Oslo, Norway, February 13–14)
All-Around—Per Ivar Moe, Norway (178.727 pts)
500 Meters—Keiichi Suzuki, Japan (time, 0:40.7)
1,500 Meters—Per Ivar Moe (2:08.0)
5,000 Meters—Jonny Nilsson, Sweden (7:33.2)
10,000 Meters—Jonny Nilsson (15:47.7)

World Championships—Women
(Oulu, Finland, Feb. 6–7)
All-Around—Inga Voronina, USSR (198.583 pts)
500 Meters—Inga Voronina (time, 0:46.8)
1,000 Meters—Inga Voronina (1:37.7)
1,500 Meters—Valentina Stenina (2:27.5)
3,000 Meters—Inga Voronina (5:18.2)

United States Outdoor
(St. Paul, Minn., January 23–24)
Senior Men
Champion—Dick Wurster, Ballston Spa, N.Y. (21 pts)
220 Yards—Bill Carow, West Allis, Wis. (time, 18.7)
440 Yards—Tom Gray, Minneapolis (0:34.8)
880 Yards—Tom Gray (1:17.8)
¾ Mile—Tom Gray (2:04.9)
Mile—Dick Wurster (2:50.4)
2 Miles—Dick Wurster (5:48.5)
5 Miles—Dick Wurster (14:16.9)
Senior Women
Champion—Jeanne Omelenchuk, Warren, Mich. (25 pts)
220 Yards—Jeanne Omelenchuk (time, 0:20.9)
440 Yards—Jeanne Omelenchuk (0:40.1)
880 Yards—Jeanne Omelenchuk (1:25.1)
¾ Mile—Jeanne Omelenchuk (2:12.4)
Mile—Jeanne Omelenchuk (3:02.1)

United States Indoor
(St. Louis, Mo., February 13–14)
Senior Men
Champion—Bud Campbell, Paramount, Calif. (16 pts)
440 Yards—Bob Fenn, Flushing, N.Y. (time, 0.38.9)
880 Yards—Bob Fenn (1:20.6)
¾ Mile—Bud Campbell (2:05.6)
Mile—Bud Campbell (2:51.8)
2 Mile—Bill Noyes, California (6:04.2)

Senior Women
Champion—Diane White, St. Paul, Minn. (15 pts)
440 Yards—Sally Blatchford, Chicago (time, 0:43.9)
880 Yards—Diane White (1:30.6)
¾ Mile—Diane White (2:18.4)
Mile—Diane White (3:16.2)

United States Open Outdoor
(Pittsfield, Mass., January 16–17)
Senior Men
Champion— Box Fenn, Flushing, N.Y. (31 pts)
220 Yards—Bob Fenn (time, 0:19.6)
440 Yards—Dick Wurster, Ballston Spa, N.Y. (0:37.5)
880 Yards—Bob Fenn (1:29.8)
¾ Mile—Bob Fenn (2:20.3)
Mile—Bob Fenn (3:10.6)
2 Mile—Bob Fenn (5:55.8)
5 Mile—Arnold Uhrlass, New York (17:19.5)

Senior Women
Champion—Jeanne Omelenchuk, Warren, Mich. (25 pts)
220 Yards—Jeanne Omelenchuk (time, 0:21.3)
440 Yards—Jeanne Omelenchuk (0:41.7)
880 Yards—Jeanne Omelenchuk (1:32.3)
¾ Mile—Jeanne Omelenchuk (2:19.7)
Mile—Jeanne Omelenchuk (3:25.1)

United States Open Indoor
(Cleveland, February 27–28)
Senior Men
Champion—Bob Fenn, Flushing, N.Y. (17 pts)
440 Yards—Mark Sullivan, Buffalo, N.Y. (time, 0:40.9)
880 Yards—Mike Passarella, Chicago (1:25.0)
¾ Mile—Bob Fenn (2:12.9)
Mile—Bob Fenn (2:57.7)
2 Miles—Bill Noyes, California (6:09.0)

Senior Women
Champion—Diane White, St. Paul (16 pts)
440 Yards—Diane White (time, 0:44.6)
880 Yards—Sally Blatchford, Chicago (1:32.4)
¾ Mile—Diane White (2:25.8)
Mile—Sally Blatchford (3:16)

LACROSSE

Intercollegiate—Navy
Ivy League—Dartmouth and Princeton (each 5–1)
Open—Navy
All-Star Game—North 15, South 10
Division Champions—*Northeast:* Williams; *Midwest:* Denison and Ohio State; *Mid-Atlantic:* Swarthmore; *New York State* (Lydecker Trophy): C.W. Post; (Cox Trophy): *Hofstra;* (Morrill trophy): Cortland, Rensselaer Polytechnic Institute, and Union (each 3–1);*Southern:* Washington College; *Western:* Arizona

MACCABIAH GAMES

(Tel Aviv, Israel, August 23–31)

Gold Medals (first places)—United States 74, Israel 31, Great Britain 12, South Africa 10, the Netherlands 5, Italy 3, Mexico 3, Argentina 2, Australia 2, Canada 2, Brazil 1, Denmark 1, Sweden 1

Medals Won by United States

	Gold	Silver	Bronze
Basketball	1	0	0
Boxing	1	2	0
Cycling	1	0	1
Fencing	7	1	0
Golf	2	2	1
Gymnastics	13	14	12
Judo	3	0	0
Lawn tennis	1	2	0
Rowing	1	0	0
Shooting	4	2	0
Swimming (men)	9	7	4
Swimming (women)	7	5	5
Track and field (men)	13	8	8
Track and field (women)	0	1	0
Volleyball	0	0	1
Water Polo	1	0	0
Weight lifting	2	2	1
Wrestling	8	3	0
Totals	74	49	33

MOTORBOATING

Major Trophy Winners

Diamond Cup (Coeur d'Alene, Idaho)—*Miss Exide,* Seattle (driver, Bill Brow)
Dixie Cup (Guntersville, Ala.)—*Miss Madison,* Madison, Ind. (Buddy Byers)
Gold Cup (Seattle)—*Miss Bardahl,* Seattle (Ron Musson)
Governor's Cup (Madison, Ind.)—*Tahoe Miss,* Reno, Nev. (Chuck Thompson)
Lake Tahoe World Championship (Stateline, Nev.)—*Miss Bardahl*
San Diego Cup (San Diego, Calif.)—*Miss Bardahl*
Spirit of Detroit Cup (Detroit)—*Tahoe Miss*
Unlimited Regatta (Ogden, Utah)—*Miss Bardahl*
Over-all—*Miss Bardahl* (7,777 pts)
Driver Champion—Ron Musson

Distance Races

Sam Griffith Memorial (130 miles)—Bill Wishnick, Scarsdale, N.Y.
Miami-Nassau (164 miles)—Don Aranow, Miami, Fla.
Around Nassau Sweepstakes (52 miles)—Don Aranow
English Channel (190 miles)—Dick Bertram and Merrick Lewis, Miami, Fla.
Miami–Key West (158 miles)—Dick Bertram
Around Long Island (245 miles)—Stanley Humes, Oceanside, N.Y., and Tom Fileman, Massapequa, N.Y.
Albany–New York (131 miles)—Don Raby, Lansing, Mich.
Viareggio-Bastia, Italy—Jim Wynne, Miami, Fla.

Predicted Log Trophies

National—Herb Ritts, Los Angeles
Huckins Memorial—Elias A. Kalil, Manhasset, N.Y.
Codrington—Ritts
Martini & Rossi—Ritts
Stone—Nick Giovan, Chicago

PARACHUTING

National Championships

(Orange, Mass., August 21–29)

Men—Over-all: Sgt. Ray Duffy, U.S. Army Parachute team, Ft. Bragg, N.C.; style: Tim Saltonstall, Ithaca, N.Y.; accuracy: John Clark, Rockland, Mass.
Women—Over-all: Susan Clements, Oakland, Calif.; style and accuracy: Susan Clements.

POLO

Outdoor Champions

National Open—Oak Brook, Ill. (Dr. William Linfoot, Charles Smith, Ronnie Tongg, Jack Murphy) 11, Bunntyco, Chicago, 5
National 20-Goal—Oak Brook–Santa Barbara (Hugo Dalmar, Jack Murphy, Charles Smith, Ronnie Tongg) 7, Milwaukee 2
National 16-Goal—Santa Barbara, Calif. (C. Heath Manning, Dr. William Linfoot, Ronnie Tongg, Tenney Tongg) 11, Crescents 10
National Inter-Circuit—Tulsa (John, Tom and Jack Oxley, R.B. Jowell) 11, Con-Car Ranch, San Mateo, Calif. 6
National 12-Goal—Tulsa 10, Broad Acres, White, Norman, Okla. 9

Indoor Champions

National Intercollegiate—Yale (Tom Walden, Alan Corey III, Dolph Orthwein) 12, Cornell 3
Sherman Memorial—*Northeast:* Patricians, Harrison, N.Y., 11, Manhattan 4; *Central:* Onwentsia, Lake Forest, Ill. 16, Ridge Ranch 9; *Northwest:* Red Rock Ranger Seniors, Colorado Springs 8; Camelback, Phoenix, Ariz. 7
12-Goal Arena—*Northeast:* Patricians 13, Huntington, L.I. 12; *Central:* Onwentsia 21, Bradley Road 3; *Pacific Coast:* Camelback (won 3, lost 0)

RODEO

Rodeo Cowboys' Association Champions

(Oklahoma City, Okla., December 4–11)

All Around—Dean Oliver, Boise, Idaho
Saddle Bronc—Shawn Davis, Whitehall, Mont.
Bare Back—Jim Houston, Omaha
Bull Riding—Larry Mahan, Brooks, Ore.
Calf Roping—Glen Franklin, House, N.M.
Steer Wrestling—Harley May, Oakdale, Calif.
Team Roping—Jim Rodriguez, Jr., Paso Robles, Calif.
Steer Roping—Sonney Wright, Alto, N.M.
Rookie of Year—Dan Willis, West, Tex.

ROWING

United States Championships

(Orchard Beach, Bronx, N.Y., Aug. 13–15;
all events except dashes at 2,000 meters)

150-Pound Quarter-Mile—Larry Walsh, Undine B.C. (1:19.3)
150-Pound Singles—Pete Johnson, Shrewsbury (Mass.) R.A. (7:50.4)
Association Singles—Bill Maher, Detroit B.C. (7:32.5)
Open Singles Quarter-Mile—Don Spero, New York A.C. (1:16.7)
Championship Singles—Bill Maher (8:10)
150-Pound Doubles—Toronto Argonauts (8:03.6)
Doubles—Fairmount R.A., Philadelphia (6:02.4)
Pairs with coxswain—Vesper B.C. Philadelphia (7:43)
Pairs without coxswain—Vesper B.C. (7:38.6)
Quadruple Sculls—Fairmount R.A. (6:30.6)
150-Pound Fours with coxswain—Detroit B.C. (7:06.4)
150-Pound Quadruple sculls—Detroit B.C. (6:48)
Intermediate Fours with Coxswain—Toronto Argonauts (7:19.2)
Fours with Coxswain—Vesper B.C. (6:41.2)
Fours without Coxswain—Vesper B.C. (6:40.2)
150-Pound Eights—Detroit B.C. No. 2 (6:47.2)
Intermediate Eights—Toronto Argonauts (6:30)
Championship Eights—Vesper B.C. (6:28.4)
Team (Barnes Trophy)—Vesper B.C. (157.5 pts)

Intercollegiate Team Champions

I.R.A. Regatta (Syracuse, N.Y., June 19)—*Varsity* (3 mi): Navy (16:51.3); *junior varsity* (3 mi): Navy (17:07.5); *freshmen* (2 mi): Navy (11:03.4); *Ten Eyck Trophy:* Navy (20 pts)
Eastern Association (Worcester, Mass., May 15; all races 2,000 meters)—*Varsity:* Harvard (6:10.4); *junior varsity:* Harvard (6:19.4); *freshmen:* Harvard (6:22.8); *varsity lightweight:* Cornell (6:21.2); *junior varsity lightweight:* Harvard (6:27.6); *freshmen lightweight:* Harvard (6:25.3); *Rowe Cup* (heavyweights): Harvard (28 pts); *Jope Cup* (lightweights): Harvard (23 pts)
Harvard-Yale—Harvard (4 mi, 19:41.6)
Metropolitan N.Y. Intercollegiates—Iona (2,000 meters, 7:06.8)
Oxford-Cambridge—Oxford (4¼ mi, 18:07)
School (National)—LaSalle College H.S., Philadelphia (1 mi, 5:01.1)
Washington-California—California ([illegible]¾ mi, 14:10.2)
Western Intercollegiate—Washington (2,000 meters, 6:34.2)
Cups and Trophies—*Adams Cup:* Harvard (1¾ mi, 8:53.5); *Atalanta Cup:* Brown (1¼ mi, 8:09); *Bill Cup:* Rutgers (2,000 meters, 7:06.5); *Blackwell Cup:* Yale (1 5/16 mi, 7:38.7); *Carnegie Cup:* Cornell (2 mi, 10:36.6); *Childs Cup:* Princeton (1¾ mi, 8:52.5); *Cochrane Cup:* Massachusetts Institute of Technology (2,000 meters, 6:53.7); *Compton Cup:* Harvard (1¾ mi, 8:15); *Dad Vail Trophy:* Northeastern (1 5/16 mi, 6:45.8); *Fox Trophy:* Amherst (1 mi, 6:22); *Goes Trophy:* Cornell (2 mi, 10:27); *Grimaldi Cup:* Howard University (2,000 meters, 6:38.3); *Madeira Bowl:* Cornell (2,000 meters, 6:36.4); *Packard Cup:* Syracuse (2 mi, 10:01); *President's (Marist College) Cup:* Northeastern (2,000 meters, 7:00.8)

American Henley

(Worcester, Mass., June 12;
All events except dashes at 2,000 meters)

Single Sculls (Quarter-Mile)—Don Spero, New York A.C. (1:06.6)
Veteran Singles—Jerome Olrich, Cambridge B.C. (2:55)
Championship Singles—Don Spero (7:40)
Doubles—Potomac B.C., Washington (6:54)
Pairs without Coxswain—Vesper B.C. (8:31.6)
Fours without Coxswain—Vesper B.C. (6:55.2)
Fours with Coxswain—Vesper B.C. (6:49.4)
Championship Eights (Steward's Cup)—Vesper B.C. (6:07.8)

British Henley

(Henley-on Thames, June 30–July 3;
All races at one mile, 550 yards)

Diamond Sculls (Singles)—Don Spero, New York A.C. (7:42, course record)
Silver Goblets (Pairs)—East Germany (7:42)
Double Sculls—Switzerland (7:01, course record)
Prince Philip Cup (Coxed Fours)—Leander Club's Americans at Oxford (7:03, course record)
Princess Elizabeth Cup (Schools)—Tabor Academy, Marion, Mass. (6:44, ties course record)
Thames Challenge Cup (Lightweight Eights)—Isis Club of England (6:37)
Steward Challenge Cup (Fours without Cox)—Quinton Boat Club of Britain (6:55, course record)
Grand Challenge Cup (eights)—Ratzeburg of West Germany (6:16, course record)

Canadian Henley

(St. Catharines, Ont., July 28–31)

Open Singles Dash—Frank Sulger, New York A.C. (time, 1:30.5)
Championship Singles—Bill Maher, Detroit B.C. (8:02)
Association Singles—Dave Robinson, Fairmount B.C., Philadelphia (7:26.7)
Doubles—Fairmount R.A., Philadelphia (7:54)
Pairs—Potomac B.C., Washington (7:43)
Four with Coxswain—Vesper B.C., Philadelphia (6:42)
Four without Coxswain—Vesper (7:24)
Championship Eights—Vesper (6:12.2)
Maple Leaf Team Trophy—St. Catharines B.C. (254 pts)

SHOOTING

National Rifle and Pistol Championships

(Camp Perry, Ohio, July 30–August 29)

Pistol

3-Weapon Aggregate—PO1 Donald L. Hamilton, U.S. Navy (2,649-133X); *regular service:* W.B. Blankenship, Jr., U.S. Army (2,643-122X); Air Force: Capt. F.C. Green (2,637-130X); Navy: PO1 D.L. Hamilton (2,649-133X); *Army Reserve:* S/Sgt M.G. Baum (2,608-99X); *Reserves:* S/Sgt P.E. Melaragno, USAR (2,601-94X); *police:* J.W. Hurst, (2,610-95X); *National Guard:* Sgt. J.C. Forman (2,598-83X); *senior:* Col. W.R. Walsh, USMC (2,573-80X); *women:* Mrs. Gertrude P. Schlernitzauer, Lowell, Mich. (2,554-76X); *collegiate:* Cadet J.A. Dickens, USMA (2,568-78X); *civilian:* J.E. Clark (2,618-119X); *team:* U.S. Air Force Blue (3,514-157X).

GIANT SLALOM WINNER Bill Marolt of Aspen, Colo., speeds down National Alpine course at Crystal Mountain, Wash., on April 4, 1965, to take U.S. men's giant slalom title. In winning the event, he was clocked at 2:49.99.

WIDE WORLD

Smallbore Rifle

3-Event Prone—M/Sgt. W.E. Krilling, USA (4,788-337X); *regular service:* M/Sgt. W.E. Krilling (4,788-337X); *civilian:* L.A. Wilkens (4,781-356X); *senior:* R.D. Triggs (4,780-331X); *women:* Marianne M. Jensen (4,775-301X); *collegiate:* L.Y. Anderson (4,769-301X); *junior:* D.B. Wood (4,768-316X).

4-Position—Capt. Lones W. Wigger, Jr., U.S. Army (1558-91X); *service:* Capt. L.W. Wigger (1558-91X); *civilian:* P.D. Bahrman (1,528-55X); *women:* Lt. Margaret L. Thompson (1,499-39X); *collegiate:* J.H. Writer (1,533-72X); *junior:* T.J. Whitaker (1,532-62X); *team* (metallic sight): Stinknik Gentlemen (1,580-87X); *team* (any sight): U.S. Army International Blue (1,531-55X).

High-Power Rifle

Bolt (7-Match Aggregate)—*Civilian:* J.A. Clerke, Santa Monica, Calif. (793-91V); *senior:* E.J. Shook (788-77V); *women:* Mrs. Miralotte S. Ickes (779-64V); *collegiate:* M.W. Tompkins (781-79V); *junior:* T.D. Malham (785-78V).

Service (7-Match Aggregate)—Lt. David H. Meredith, USA (796-79V); *regular service:* Lt. D.H. Meredith (796-79V); *Navy:* PO2 M.D. Nolta (786-73V); *Army Reserve:* Lt. H.N. Clark (787-73V); *National Reserve:* Lt. Col. S.C. Burkhalter (786-83V); *National Guard:* Lt. A.M. Dapp (792-80V); *civilian:* C.R. Umback (789-60V); *women:* Lt. Margaret L. Thompson (783-60V); *collegiate:* R. Beard (787-65V); *senior:* Col. W.R. Walsh (780-52V); *junior:* B.D. Goldsby (784-63V).

Trap

Grand American Championships

(Vandalia, Ohio, August 23–28)

Grand American Handicap—Daniel C. Pautler, Jr., Alden, N.Y. (20 yards, 99x100)

Women's Grand American Handicap—Nancy Krebs, Ripon, Wis. (20 yards, 94x100—24x25 shoot-off)

Junior Grand National Handicap—Daniel C. Pautler, Jr. (20 yards, 99x100)

Veterans Grand National Handicap—Earl C. Thompson, Peoria, Ill. (24 yards, 93x100)

Champion of Champions—Edgar Kyle, Colorado Springs, Colo. (100x-100—125x125 shoot-off)

Clay Target—Gene Sears, El Reno, Okla. (200x200—50x50 shoot-off)

Double Targets—J. Hood Nichols, Jefferson City, Tenn. (97x100)

High Over-all—Hiram Bradley, Greenville, Ohio (959x1,000); *women:* Sara Bourgeois, Jackson, Miss. (932x1,000); *junior:* Doug Bedwell, Brazil, Ind. (956x1,000); *professional:* Richard Baldwin, Danbury, Conn. (950x1,000)

All-Around—Bueford Bailey, Big Springs, Neb. (387x400); *women:* Sara Bourgeois (368x400); *junior:* Doug Bedwell (379x400); *professional:* Richard Baldwin (381x400)

Skeet

World Championships

National Skeet Shooting Association

(Savannah, Ga., July 31–August 8)

All-Around—*Open:* James A. Bellows, Encino, Calif. (544x550, 4-gun aggregate); *12-gauge:* James Prall, Lackland AFB, Tex. (250x250); *20-gauge:* Vernie Surber, Wichita, Kan. (100x100); *28-gauge:* Robert Rodale, Allentown, Pa. (100x100); *.410-gauge:* Capt. Strother Shumate, Jr., Lackland AFB, Tex. (98x100); *women:* Mrs. Evelyn Jones, Dallas (542x550); *veterans:* Carl B. Stutzman, Peoria, Ill. (531x550); *seniors:* T.V. Hannaford, Warren, Mich. (540x550); *sub-seniors:* Claude W. Purbaugh, Monrovia, Calif. (541x550); *juniors:* Vernie Surber (543x550); *industry:* Kenneth Sedlecky, Alvo, Neb. (549x550)

Teams—*Two-man:* Al and Robert Shuley, Roselle, Ill. (1,083x1,100); *five-man:* USAF Internationals, Lackland AFB, Tex. (Robert Reay, Jack Johnson, James Prall, Douglas Fessler, David Bywater, 2,704x-2,750)

Champion of Champions—CWO George A. Young, Burton, S.C. (100x-100)

SKIING

United States Championships

Alpine (Crystal Mountain, Wash., April 2–4)—*Men's downhill:* Loris Werner, Steamboat Springs, Colo. (2:14.78); *men's slalom:* Rod Hebron, Canada (2:00.30); *men's giant slalom:* Bill Marolt, Aspen, Colo. (2:49.99); *men's combined:* Peter Duncan, Montreal, Can. 76.03 pts); *women's downhill:* Nancy Greene, Rossland, B.C., Canada (2:09.61); *women's slalom:* Nancy Greene (1:40.87); *women's giant slalom:* Nancy Greene (2:05.36) *women's combined:* Nancy Greene (.00 pts)

Nordic (Steamboat Springs, Colo., Feb. 12–14)—*15-kilometer cross country:* Mike Elliott, Durango, Colo. (59.49); *jump:* Tom Upham, Auburn, Me. (256.2 pts); *combined:* Tom Upham (484.60 pts)

Jumping (Berlin, N.H., Feb. 28)—*seniors:* David Hicks, Duluth, Minn. (225.4 pts); *veterans:* Bill Olson, Eau Claire, Wis. (220.3 pts)

National Collegiate (NCAA) Championships

(Crystal Mountain, Wash., March 25–27)

Alpine—*Slalom:* Rick Chaffee, Denver U. (1:48.25); *downhill:* Bill Marolt, Colorado (2:11.89); *combined:* Chaffee

Nordic—*Cross-Country:* Mike Elliott, Ft. Lewis College, Colo. (55:34); *jump:* Erik Jansen, Denver U. (219.8); *combined:* Matz Jenssen, Utah (451.65)

Skimeister—Loris Werner, Western Colorado State (356.6)

Team—Denver University (380.5)

SOCCER

United States Champions

National Challenge Cup—New York Ukrainians

National Amateur Cup—German-Hungarians, Philadelphia

National Junior Cup—Immaculate Heart of Mary, St. Louis

American League—Hartford, Conn.

Intercollegiate—NCAA: St. Louis University; NAIA: Trenton State

International League—First Section: New York; second Section: Polonia Bytom, Poland; play-off: Polonia; Challenge Cup play-off: Polonia defeated Dukla

Foreign Champions

English League—Manchester United

English Cup—Liverpool

English League Cup—Chelsea

Scottish League—Kilmarnock

Scottish Cup—Glasgow Celtics

Scottish League Cup—Glasgow Rangers

European Cup of Nations—Internazionale of Milan

European Cup of Cup Winners—West Ham United, England

SOFTBALL

Amateur Softball Association Champions

Men—Aurora (Ill.) Sealmasters

Women—Orange (Calif.) Lionettes

16-Inch—Chicago Bobcats

Slow Pitch (open)—Skip A.C., Pittsburgh

Slow Pitch (industrial)—E.L. Wiegand, Pittsburgh

Slow Pitch (women)—Art's Aces, Omaha

International

Team—Australia 1, Stratford (Conn.) Raybestos Brakettes, 0

SQUASH RACQUETS

National Champions

Men's Singles—Steve Vehslage, New York

Veteran's Singles—Vic Seixas, Philadelphia Open and U.S. Professional—Mohibullah Khan, Boston

Men's Doubles—G. Diehl Mateer, Jr., Philadelphia, and Ralph Howe, New York

Men's Senior Doubles—William T. Ketcham, Jr., and James Ethridge, New York

Women's Singles—Joyce Davenport, Philadelphia

Women's Doubles—Mrs. Charles Classen, Merion, Pa., and Mrs. F.A.C. Vosters, Jr., Wilmington, Del.

Women's Senior Singles—Mrs. Baba Lewis, Boston

Women's Senior Doubles—Mrs. H.L.G. Clement, Merion, Pa., and Mrs. F.A.C. Vosters, Jr.

United States Team—New York

Lapham Cup—United States

Grant Cup—Canada

Canadian Champions—*Singles:* Robert Hetherington, Boston; *Doubles:* Sam Howe, Philadelphia, and William Danforth, Pittsburgh

SWIMMING

Because the Yale pool is only 25 yards long, what may have been the finest swimming achievement of 1965 could not be submitted for world record status. Steve Clark swam 100 yards freestyle in 45.6–the first time the distance was ever covered in less than 46 seconds. Swimmers rank this feat with a 4-minute mile or a 17-foot pole-vault. However, achievements in pools less than 50 meters or 55 yards long are not considered for world recognition. Clark, a senior at Yale, had twice hit 46.1 before his great effort in the final of the AAU indoor championships in April.

There were, however, enough excellent performances by young American swimmers to wash several records from the books. Foremost among the young swimmers was Patty Caretto, a 14-year-old, ninth-grade student from Whittier, Calif. She set world marks of 18:23.7 for 1,500 meters freestyle, 9:56.2 for 880 yards, and 18:51.1 for 1,650 yards. The first two records were set at Cardiff, Wales, where a U.S. team, in a dual meet with Britain in August, bettered five world marks and 12 additional American records.

Because of their fantastic showing in the 1964 Olympics, American swimmers were in demand all over the world for competition and exhibitions in 1965. Some nations were eager to copy the AAU age-group program that had developed so many excellent swimmers.

Among other world-record performances by girls, who shattered most of the American marks in AAU meets, were Martha Randall's 400-meter freestyle in 4:38 and Claudia Kolb's 100-meter breaststroke in 1:17.1 as she won three national titles. Kendis Moore swam the 200-meter butterfly in 2:26.3, but lost her world mark six days later to Ada Kok, of the Netherlands, who swam the distance in 2:25.8.

Steve Krause, of Seattle, was the only American man to set a world record that could be accepted. He swam the 1,500-meter freestyle in 16:58.1, breaking Roy Saari's mark. Saari won three freestyle events in helping the University of Southern California to win the NCAA championship, and he beat Clark in the 200-yard freestyle.

Don Schollander, winner of four Olympic gold medals and the Sullivan Award as America's outstanding athlete in 1964, was almost inactive. Burdened by studies at Yale, he then contracted mononucleosis while on a swimming tour in Switzerland in July.

Men's AAU Outdoor Championships

(Maumee, Ohio, August 11–15)

100-Meter Freestyle—Don Roth, Santa Clara (Calif.) S.C. (time, 0:53.8)
200-Meter Freestyle—Gary Ilman, Santa Clara S.C. (1:59)
400-Meter Freestyle—John Nelson, Pompano Beach, Fla. S.A. (4:14.1)
1,500-Meter Freestyle—Steve Krause, Cascade S.C. (16:58.6)
100-Meter Breaststroke—Tom Tretheway, Indiana A.C. (1:08.3)
200-Meter Breaststroke—Chet Jastremski, unattached (2:30.7)
100-Meter Backstroke—Thompson Mann, North Carolina A.C. (1:00.5)
200-Meter Backstroke—Thompson Mann (2:12.4)
100-Meter Butterfly—Luis Nicolao, Santa Clara S.C. (0:57.8)
200-Meter Butterfly—Carl Robie, Vesper B.C., Philadelphia, (2:07.7)
200-Meter Individual Medley—Dick Roth, Santa Clara S.C. (2:14.9)
400-Meter Individual Medley—Dick Roth (4:49.2)
400-Meter Medley Relay—Indiana Aquatic Club (Pete Hammer, Tom Tretheway, Kevin Berry, Robert Windle, 4:01.8)
400-Meter Freestyle Relay—Santa Clara S.C. Team A (Luis Nicolao, Greg Buckingham, Dick Roth, Gary Ilman, 3:36.1)
800-Meter Freestyle Relay—Santa Clara S.C. Team A (Dick Roth, Don Roth, Mike Wall, Gary Ilman, 8:04.6)
One-Meter Springboard Diving—Bernie Wrightson, Dick Smith S.G., Phoenix (494.50 pts)
3-Meter Springboard Diving—Bernie Wrightson (550.65)
Platform Diving—Bernie Wrightson (452.40)
Team Champion—Santa Clara Swim Club (182 pts)

Men's AAU Indoor Championships

(New Haven, Conn., April 1–3)

100-Yard Freestyle—Steve Clark, Yale (0:45.6)
200-Yard Freestyle—Don Schollander, Yale Freshmen (1:41.7)
500-Yard Freestyle—Carl Robie, Ann Arbor, Mich. (4:44.1)
1,650-Yard Freestyle—Roy Saari, Southern California (16:40.8)
100-Yard Breaststroke—Paul Scheerer, Ann Arbor, Mich. (1:00.4)
200-Yard Breaststroke—Ken Merten, Los Angeles, (2:11.8)
100-Yard Backstroke—Thompson Mann, North Carolina A.C. (0:52.5)
200-Yard Backstroke—Thompson Mann (1:56.8)
100-Yard Butterfly—Luis Nicolao, Santa Clara, Calif. (0:50.9)
200-Yard Butterfly—Carl Robie (1:42.7)
200-Yard Individual Medley—Roy Saari (1:56.2)
400-Yard Individual Medley—Greg Buckingham, Atherton, Calif. (4:08.9)
400-Yard Freestyle Relay—Southern California A Team (Bob Bennett, Jim McGrath, Rich McGeath, Roy Saari; 3:07.4)
400-Yard Medley Relay—Southern California (Bob Bennett, Bill Craig, Rich McGeath, Roy Saari; 3:31.9)
One-Meter Dive—Kenneth Sitzberger, Bloomington, Ind. (519.65 pts)
3-Meter Diving—Richard Gilbert, Bloomington, Ind. (562.55 pts)
Team—Southern California (74 pts)

Men's AAU Indoor Platform Diving Championships

(Pittsburgh, Pa., April 5)

Senior—Chuck Knorr, Santa Clara, Calif. (472.25 pts)
Junior—Mike Finneran, Rolling Hills, Calif. (387.50 pts)

Women's AAU Outdoor Championships

(Maumee, Ohio, August 11–15)

100-Meter Freestyle—Pokey Watson, Santa Clara (Calif.) Swim Club (time, 1:00.7)
200-Meter Freestyle—Martha Randall, Vesper B.C., Philadelphia (2:12.3)
400-Meter Freestyle—Martha Randall (4:39.2)
1,500-Meter Freestyle—Patty Caretto, City of Commerce (Calif.) S.C. (18:23.7)
100-Meter Breaststroke—Claudia Kolb, Santa Clara S.C. (1:17.1)
200-Meter Breaststroke—Claudia Kolb (2:48.6)
100-Meter Backstroke—Christine Caron, France (1:08.1)
200-Meter Backstroke—Judy Humbarger, Fort Wayne (Ind.) Olympia, and Cathy Ferguson, Los Angeles A.C., tie (2:28)
100-Meter Butterfly—Sue Pitt, Scarlett Jets S.C., East Brunswick, N.J. (1:06.2)
200-Meter Butterfly—Kendis Moore, Arizona Desert Rats, Phoenix (2:26.3)
200-Meter Individual Medley—Claudia Kolb (2:30.8)
400-Meter Individual Medley—Mary Ellen Olcese, Vesper B.C. (5:19.6)
400-Meter Freestyle Relay—Santa Clara S.C. (Terri Stickles, Jana Haroun, Linda Hildreth, Pokey Watson, 4:08.6)
800-Meter Freestyle Relay—City of Commerce A Team (Patty Caretto, Dolores Pfeiffer, Mary Campbell, Jeanne Hallock, 9:00.1)
400-Meter Medley Relay—Santa Clara S.C. Team A (Pokey Watson, Claudia Kolb, Linda Hildreth, Terri Stickles, 4:38.4)
1-Meter Springboard Diving—Joel O'Connell, Santa Clara S.C. (450.95 pts)
3-Meter Springboard Diving—Micki King, Ann Arbor (Mich.) S.C. (463.05)
Platform Diving—Lesley Bush, unattached (345.65)
Team Championship—Santa Clara Swim Club (196 pts)
Synchronized Swimming—*Stunt:* Patty Willard, San Francisco Merionettes; *Solo:* Pam Morris, Merionettes; *Duet:* Pam Morris and Patty Willard; *team:* San Francisco Merionettes (119.609)

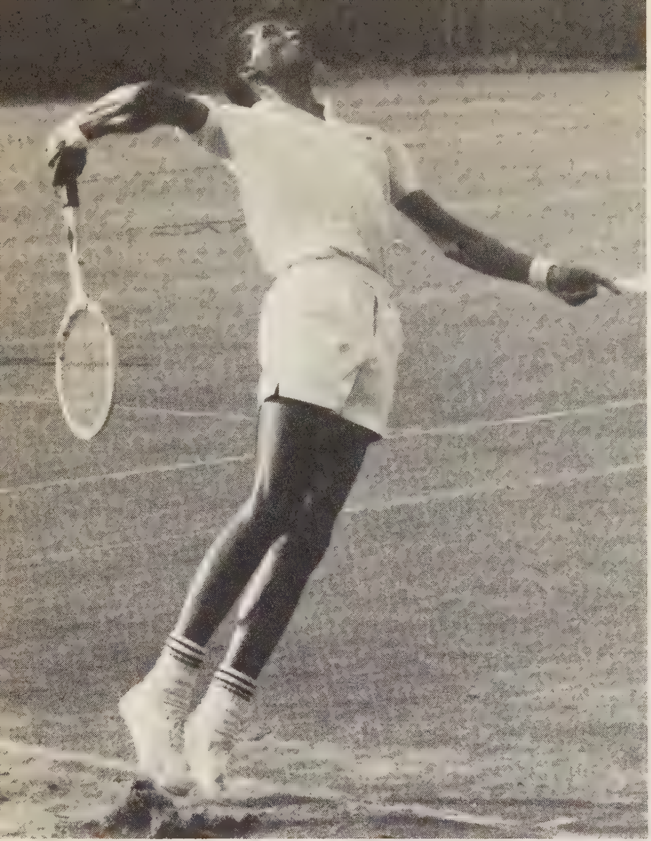
Women's AAU Indoor Championships

(Commerce, Calif., April 8–11)

100-Yard Freestyle—Jeanne Hallock, City of Commerce (Calif.) A (0:54.5)
200-Yard Freestyle—Penny Estes, Miami, Fla. (1:58.2)
500-Yard Freestyle—Patty Caretto, City of Commerce Swim Club (5:15.6)
1,650-Yard Freestyle—Patty Caretto (18:03.6)
100-Yard Breaststroke—Cynthia Goyette, Detroit (1:09.0)
200-Yard Breaststroke—Cynthia Goyette (2:26.4)
100-Yard Butterfly—Sharon Stouder, City of Commerce S.C. (0:58.0)
200-Yard Butterfly—Sue Pitt, East Brunswick, N.J. (2:09.6)
100-Yard Backstroke—Cathy Ferguson, Los Angeles (1:00.9)
200-Yard Backstroke—Cathy Ferguson (2:13.2)
200-Yard Individual Medley—Jeanne Hallock (2:14.2)
400-Yard Individual Medley—Sharon Finneran, Santa Clara S.C. (Calif.) (4:47.4)
400-Yard Freestyle Relay—City of Commerce A (Sharon Stouder, Dolores Pfeiffer, Mary Campbell, Jeanne Hallock; 3:40.8)
400-Yard Medley Relay—City of Commerce A (Mary Campbell, Sandy Nitta, Sharon Stouder, Jeanne Hallock; 4:06.8)
1-Meter Diving—Joel O'Connell, Santa Clara (415.15)
3-Meter Diving—Joel O'Connell (438.25)
Platform Diving—Micki King, Ann Arbor (Mich.) S.C. (304.55)
Team—City of Commerce S.C. (159 pts)

AT INTERNATIONAL MEET IN BUDAPEST in August, Cary Dilley, U.S. (c.), won 200-meter backstroke, with V. Mazanov, USSR (l.), 2nd, and Thompson Mann, U.S. (r.), 3d.

KEYSTONE


WIDE WORLD

U.S. TENNIS FANS watched Arthur Ashe, UCLA student, rise to world stature in 1965 by upsetting Roy Emerson at Forest Hills on Sept. 10. Here, Ashe serves against Emerson.

National Collegiate (NCAA) Championships

(Ames, Iowa, March 25–27)

50-Yard Freestyle—Steve Clark, Yale (time, 0:21.2)
100-Yards Freestyle—Steve Clark (0:46.1)
200-Yard Freestyle—Roy Saari, Southern California (1:42.9)
500-Yard Freestyle—Roy Saari (4:43.6)
1,650-Yard Freestyle—Roy Saari (16:39.9)
100-Yard Breaststroke—William Craig, Southern California (1:00.3)
200-Yard Breaststroke—Tom Tretheway, Indiana (2:10.4)
100-Yard Backstroke—Gary Dilley, Michigan State (0:52.6)
200-Yard Backstroke—Gary Dilley (1:56.2)
100-Yard Butterfly—Fred Schmidt, Indiana (0:51)
200-Yard Butterfly—Fred Schmidt (1:51.4)
200-Yard Individual Medley—Robert Hopper, Ohio State (1:58.1)
400-Yard Individual Medley—Carl Robie, Michigan (4:16.6)
400-Yard Medley Relay—Indiana (Glen Hammer, Tom Tretheway, Fred Schmidt, Robert Williamson, 3:30.7)
400-Yard Freestyle Relay—Yale (David Lyons, Doug Kennedy, Ed Townsend, Steve Clark 3:07.2)
1-Meter Diving—Ken Sitzberger, Indiana (511.25 pts)
3-Meter Diving—Ken Sitzberger (565.05)
Team—Southern California (285) pts)

Intercollegiate Team Champions

NCAA—Southern California
NAIA—Macalester
College Conferences—*Athletic Association of Western Universities:* Southern California; *Atlantic Coast:* Maryland; *Big Eight:* Oklahoma; *Big Ten:* Indiana; *Central Intercollegiate AA:* Howard; *Ivy:* Yale; *Mid-American:* Ohio University; *Mid-Atlantic:* Bucknell (University); Franklin and Marshall (College); *Missouri Valley:* Cincinnati; *Southeastern:* Florida; *Southern:* Virginia Military Institute; *Southwestern:* Southern Methodist; *Western AC,* Utah.

TABLE TENNIS

World Championships

(Ljubljana, Yugoslavia, April 15–25)

Men's Singles—Chuang Tse-tung, Communist China
Women's Singles—Naoko Fukazu, Japan
Men's Doubles—Chuang Tse-tung and Hsu Yin-sheng, Communist China
Women's Doubles—Lin Hui-ching and Cheng Min-chin, Communist China
Mixed Doubles—Koji Kimura and Masako Seki, Japan
Swaythling Cup and Corbillon Cup—Communist China

United States Championships

(Detroit, March 19–21)

Men's Singles—Erwin Klein, Los Angeles
Women's Singles—Patty Martinez, San Diego
Men's Doubles—Erwin Klein and Bernie Bukiet, New York
Women's Doubles—Connie Stace, Grand Rapids, Mich.,
Women's Doubles—Connie Stace, Grand Rapids, Mich., and Donna Chaimson, Cheverly, Md.
Mixed Doubles—Dell Sweeris, Grand Rapids, and Connie Stace
Seniors—Sol Schiff, New York

TENNIS

Just when it seemed that two Australians, Roy Emerson and Fred Stolle, had a complete lock on all major tennis titles, two American college boys threw their racquets into the works. The stoppage came at the U.S. championships at Forest Hills. Neither of the collegians, Arthur Ashe and Charles Pasarell, teammates at UCLA, went through to the final, but they ended the Australian monopoly and cleared the way for Manuel Santana, of Spain, to achieve his finest triumph. Santana defeated Cliff Drysdale, of South Africa, in four sets in the finals.

Emerson, generally acknowledged as the world's leading amateur, had come to Forest Hills possessing the Australian and Wimbledon titles. Stolle held the one title Emerson missed—the French championship—and was runner-up in the others. They were rated one-two. In the quarter-finals, however, Ashe, the first Negro chosen to the U.S. Davis Cup team, overpowered Emerson in four sets. And Pasarell, a Puerto Rican, blasted Stolle out of the tournament in a three-set rout.

Santana had been the dominant factor in leading Spain to a 4–1 victory over the United States in Davis Cup interzone play at Barcelona and on to the challenge round against Australia. In the closing days of December, Australia captured the Davis Cup, symbol of tennis supremacy, for the second year in a row by whipping Spain, 4–1, in the final at Sydney. Santana defeated Emerson to register Spain's lone point.

In women's tennis, the Australian champion, Margaret Smith, also held a near monopoly. However, she, like Emerson, was defeated in Paris in the spring and lost the French title to her teammate, Lesley Turner. Miss Smith beat Billy Jean Moffitt King, of California, in the U.S. singles final at Forest Hills.

The U.S. men's indoor singles championship also went abroad. It was taken to Sweden by Jan-Erik Lundquist.

The year 1965 ended with a gleam of hope for Americans, however. As the collegians competed in Australian tourneys, Ashe beat Emerson twice. In addition, Marty Riessen and Clark Graebner won over top-rated Aussies in both singles and doubles.

Major Amateur Tournaments

Davis Cup—Australia (defeated Spain, 4-1, at Sydney, Australia, Dec. 26–27)
Wightman Cup (Women)—United States (defeated Britain, 5-2, at Cleveland, Aug. 6–9)
Stevens Cup (Seniors)—United States (defeated Canada 3-2, at Forest Hills, Oct. 2–3)
U.S. Doubles (Brookline, Mass.; finals Aug. 29)—Roy Emerson and Fred Stolle, Australia; *women:* Mrs. Carole Graebner, Beechwood, Ohio, and Nancy Richey, Dallas
U.S. Singles and Mixed Doubles (Forest Hills, N.Y.; finals, Sept. 12)—Manuel Santana, Spain; *women:* Margaret Smith, Australia; *mixed doubles:* Fred Stolle and Margaret Smith, Australia; *senior:* Robert Sherman, Temple City, Calif.
U.S. Clay Court (River Forest, Ill.; finals, July 18)—Dennis Ralston; *women:* Nancy Richey; *men's doubles:* Clark Graebner, Beechwood, Ohio, and Marty Riessen, Evanston, Ill.; *women's doubles:* Nancy Richey; and Mrs. Carole Graebner
U.S. Men's Indoor (Salisbury, Md.; finals, Feb. 21)—Jan-Erik Lundquist, Sweden; *doubles:* Dennis Ralston, Bakersfield, Calif., and Chuck McKinley, Port Washington, N.Y.
U.S. Women's Indoor (Brookline, Mass.; finals, Feb. 13)—Nancy Richey; *doubles:* Mary Ann Eisel and Mrs. Carol Hanks Auchamp, St. Louis.
Australian National (Melbourne; finals, Jan. 31–Feb. 1)—Roy Emerson; *women:* Margaret Smith; *men's doubles:* John Newcombe and Tony Roche; *women's doubles:* Margaret Smith and Lesley Turner
French International (Paris; finals, May 29–30)—Fred Stolle, Australia; *women:* Lesley Turner; *men's doubles:* Roy Emerson and Fred Stolle; *women's doubles:* Margaret Smith and Lesley Turner; *mixed doubles:* Ken Fletcher and Margaret Smith
Wimbledon (England; finals, July 2–3)—Roy Emerson; *women:* Margaret Smith; *men's doubles:* Tony Roche and John Newcombe; *women's doubles:* Maria Bueno, Brazil, and Billie Jean Moffitt, Long Beach, Calif.; *mixed doubles:* Ken Fletcher and Margaret Smith

Other Championships

American Tennis Association (Wilberforce, Ohio; finals, Aug. 21)—Louis Glass, New York; *women:* Bonnie Logan, Detroit

Professional

U.S. Grass Court (Brookline, Mass.)—Ken Rosewall
U.S. Indoor (New York)—Rod Laver
Masters (Los Angeles)—Rod Laver

Intercollegiate

NCAA—Arthur Ashe, UCLA; *doubles:* Ashe and Ian Crookenden, UCLA; *team:* UCLA; *small college:* Gary Johnson, Los Angeles State; *doubles:* John Yeomans and Bill Schoen, Redlands; *team:* Los Angeles State
NAIA—George Kon, Pan American; *doubles:* Detlev Nitsche and Sherwood Stewart, Pan American; *team,* Pan American
Women—Mimi Henreid, UCLA; *doubles:* Nancy Falkenburg and Cynthia Goeletz, Mary Baldwin College

Intercollegiate Team Champions

NCAA—University of California at Los Angeles (UCLA)
NAIA—Pan American
College Conferences—*Athletic Association of Western Universities:* UCLA; *Atlantic Coast:* North Carolina; *Big Eight:* Kansas; *Big Ten:* Michigan; *Central Intercollegiate AA:* Hampton Institute; *Ivy:* (tie) Harvard, Penn, Princeton; *Mid-American:* Western Michigan; *Mid-Atlantic:* Swarthmore; *Missouri Valley:* Wichita; *Southeastern:* Mississippi State; *Southern:* Davidson; *Southwestern:* Rice; *Western:* Utah; *Yankee:* Vermont

MICHEL JAZY, of France, is shown setting a 2-mile run record of 8:22.6 at Melun, France, on June 23, 1965. Two weeks earlier he cut the mile record to 3:53.6.

UPI

TRACK AND FIELD

The spotlight in track focused on record-shattering performances by three distance runners from three continents.

Foremost of the records to fall was that for the mile, which Michel Jazy, of France, lowered to 3:53.6 at Rennes on June 9. Two weeks later he ran two miles in a record 8:22.6 and simultaneously was clocked at 7:49 for 3,000 meters—a time that lowered his own previous mark. In this race he beat Ron Clarke, of Australia, who was on a record-breaking splurge, too.

In June, in Los Angeles, Clarke ran three miles in a record 13:00.4 while he was cutting his own February record for 5,000 meters to 13:25.8. On July 10, in London, he lowered the three-mile mark to 12:52.4. Four days later, in Oslo, he set records for six miles at 26:47 and for 10,000 meters at 27:39.4.

Meanwhile, in Helsinki, Jazy beat Clarke in a 5,000-meter race. Also ahead of Clarke was Kipchoge Keino, of Kenya. In August, Keino shattered the 3,000-meter record with a clocking of 7:39.5 in Sweden—just three weeks after Siegfried Herrmann of East Germany had established a record of 7:46.0 for the distance. By November, Keino also had acquired the 5,000-meter record, bettering Clarke's mark with 13:24.2 in New Zealand.

Americans were busy breaking field records, too. Randy Matson set a phenomenal mark of 70 feet, 7 inches for the shot put; Hal Connolly raised his hammer throw record to 233 feet, 9½ inches, before Gyula Zsivotsky, of Hungary, broke it with a throw of 241 feet, 11 inches. Ralph Boston added another half-inch to his long jump record with a leap of 27 feet, 5 inches.

During 1965 the U.S. Senate investigated a jurisdictional dispute between the Amateur Athletic Union (AAU) and the National Collegiate Athletic Association (NCAA). The Senate was drawn into the controversy because of threatened disciplinary action by the U.S. Track and Field Federation—created by the NCAA—against college athletes who might participate in the AAU championships. The American team, made up of AAU champions, subsequently lost to the USSR, 118–112, in Kiev in August—the first time the men had been defeated in a dual meet with the Russians. The Senate hearings led to the appointment of an arbitration panel of five men, named by Vice President Hubert Humphrey, to seek a solution. Despite a so-called truce, the wrangling between the groups had not abated when the indoor season arrived.

Men's AAU Outdoor Championships

(San Diego, Calif., June 26–27)

100-Yard Dash—George Anderson, unattached (0:9.3)
220-Yard Dash—Adolph Plummer, Southern California Striders (0:20.6)
440-Yard Dash—Ollan Cassell, unattached (0:46.1)
880-Yard Run—Morgan Groth, Oregon State T & F Club (1:47.7)
Mile Run—Jim Ryun, unattached (3:55.3)
3-Mile Run—Bob Schul, unattached (13:10.4)
6-Mile Run—Billy Mills, U.S. Marine Corps (27:11.6)
2-Mile Walk—Ron Laird, New York A.C. (14:04.2)
3,000-Meter Steeplechase—George Young, unattached (8:50.6)
120-Yard High Hurdles—Willie Davenport, U.S. Army (0:13.6)
440-Yard Low Hurdles—Rex Cawley, Pasadena A.A. (0:50.3)
Long Jump—Ralph Boston, Southern California Striders (26 ft 3½ in)
High Jump—Otis Burrell, Southern California Striders (7 ft)
Pole Vault—John Pennel, unattached (17 ft)
Triple Jump—Art Walker, U.S. Army (53 ft 1 in)
Shot Put—John McGrath, Pasadena A.A. (63 ft)
Javelin—William Floerke, Kansas City Olympic Club (258 ft 7 in)
Discus—Ludvik Danek, Czechoslovakia (205 ft 7 in)
Hammer Throw—Harold Connolly, Culver City A.C. (232 ft 1 in)
Team—Southern California Striders (102 pts)

U.S. Track and Field Federation Outdoor Championships

(Bakersfield, Calif., June 11–12)

100 Yards—Lynn Headley, Nebraska (0:9.5)
220 Yards—Tommy Smith, San Jose (0:20.9)
440 Yards—Don Payne, Kansas State (0:46.2)
880 Yards—Charles Christmas, Abilene Christian (1:50.1)
120-Yard High Hurdles—Paul Kerry, Southern California (0:13.7)
440-Yard Hurdles—Larry Livers, Villanova (0:51)
Mile—Bob Day, Bruin T.C., Los Angeles (3:56.4)
3-Mile Run—Doug Brown, Montana (13:29.1)
6-Mile Run—Gerry Lindgren, Washington State (28:21.7)
3,000-Meter Steeplechase—Darnell Clibborn, Bruin T.C., Los Angeles (9:22.9)
440-Yard Relay—San Jose State (0:40)
Mile Relay—Iowa (3:08.7)
2-Mile Relay—Villanova (7:20.4)
High Jump—Otis Burrell, Nevada (6 ft 10¼ in)
Pole Vault—Bill Fosdick, Southern California (15 ft 6 in)
Long Jump—Wellesley Clayton, Southern California (24 ft 2¾ in)
Triple Jump—Charles Craig, Fresno State (50 ft 10 in)
Shot Put—Roger Orrell, Abilene Christian (59 ft 3 in)
Discus—Bob Stoecker, Stanford (186 ft 9½ in)
Javelin—John Tushaus, Arizona (249 ft 2½ in)
Hammer Throw—Bill Corsetti, Northeastern (192 ft 3 in)
Team—Southern California (62 pts)

National Collegiate (NCAA) Outdoor Championships

(Berkeley, Calif., June 17–18)

100 Yards—Charles Greene, Nebraska (0:09.4)
220 Yards—Earle Horner, Villanova (0:21.1)
440 Yards—Jim Kemp, Kentucky State (0:46.2)
880 Yards—Tom Farrell, St. John's N.Y. (1:48.1)
120-Yard High Hurdles—Paul Kerry, Southern California (0:13.9)
440-Yard Hurdles—Larry Godfrey, San Diego State (0:51.5)
Mile—Bob Day, University of California at Los Angeles (4:01.8)
3-Mile Run—Doug Brown, Montana (13:40.2)
6-Mile Run—Doug Brown (27:59.2)
Steeplechase—Bruce Mortenson, Oregon (9:00.8)
440-Yard Relay—San Jose State (Wayne Hermen, Lloyd Murad, Maurice Compton, Tommy Smith; 0:40.5)
Mile Relay—California (Chuck Glenn, Dave Fishback, Forrest Beaty, Dave Archibald; 3:07.5)
Long Jump—Clarence Robinson, New Mexico (25 ft 10½ in)
High Jump—Frank Costello, Maryland (6 ft 11 in)
Triple Jump—Clarence Robinson (50 ft 2 in)
Pole Vault—Bill Fosdick, Southern California (15 ft 8½ in)
Shot Put—Neal Steinhauer, Oregon (62 ft 6 in)
Hammer Throw—John Fiore, Boston College (200 ft 10 in)
Discus—Bob Stoecker, Stanford (183 ft 7½ in)
Javelin—John Tushaus, Arizona (250 ft 5½ in)
Team—Oregon and Southern California, tie (32 pts)

Men's AAU Indoor Championships

New York, February 19–20)

60 Yards—Sam Perry, Fordham (0:6.0)
60-Yard High Hurdles—Ralph Boston, Southern California Striders (0:7.2)
600 Yards—Jack Yerman, Santa Clara (Calif.) Youth Village (1:11.3)
1,000 Yards—Ted Nelson, Southern California Striders (2:10.5)
Mile—James Grelle, Los Angeles (4:07.4)
3 Miles—Billy Mills, U.S. Marine Corps (13:25.4)
Mile Walk—Ronald Zinn, Cambridge, Mass. (6:25.7)
Mile Relay—Camp Pendleton Marines (Dick Edmunds, Dick Metzger, Ron Freeman, Jim Heath; 3:16)
2-Mile Relay—Villanova (James Orr, Al Adams, Tom Sullivan, Noel Carroll; 7:28.2)
1,060-Yard Medley Relay—Southern California Striders (Ron Whitney, Larry Dunn, Don Webster, Adolph Plummer; 1:54.4)
High Jump—Valery Brumel, USSR (7 ft 2 in)
Long Jump—Igor Ter-Ovanesyan, USSR (26 ft 2¼ in)

WIDE WORLD

RANDY MATSON, of Texas A. & M. University, sets world record (70 feet, 7 inches) for the shot put, during Southwest Conference meet at College Station, Texas, on May 8.

35-Pound Weight Throw—Hal Connolly, Culver City (Calif.) A.C. (70 ft ½ in)
Shot Put—John McGrath, Pasadena (Calif.) A.A. (62 ft 10¼ in)
Pole Vault—Billy Pemelton, Dallas (16 ft)
Team—Southern California Striders (26 pts)

National Collegiate (NCAA) Indoor Championships

(Detroit, March 12–13)

60 Yards—Charlie Greene, Nebraska (0:06.1)
60-Yard High Hurdles—Gene Washington, Michigan State (0:07.2)
440 Yards—Theron Lewis, Southern Univ. (0:47.8)
600 Yards—Leland Albright, Louisiana State (1:10)
880 Yards—Tom Van Ruden, Oklahoma State (1:51.8)
1,000 Yards—Robin Lingle, Missouri (2:09.9)
Mile—Chris Johnson, Southern California (4:08)
2-Mile Run—Herald Hadley, Kansas, (8:56.4)
Mile Relay—Morgan State (Dennis Edgehill, Herman Hawthorne, Tim Johnson, Nick Lee; 3:15.6)
Two-Mile Relay—Oklahoma State (Jim Metcalf, John Perry, Tom Van Ruden, Dave Perry; 7:27.9)
High Jump—Frank Costello, Maryland (6 ft 10 in)
Long Jump—Mike Cole, Maryland (25 ft 1 in)
Pole Vault—Bob Yard, Washington State (15 ft 8¼ in)
Shot Put—Randy Matson, Texas A. & M. (63 ft 2¼ in)
Team—Missouri (14 pts)

Women's AAU Outdoor Championships

(Columbus, Ohio, July 2–3)

100 Yards—Wyomia Tyus, Tennessee State (0:10.5)
220 Yards—Edith McGuire, Tennessee State (0:23.6)
440 Yards—Janell Smith, Fredonia, Kan. (0:55.1)
880 Yards—Marie Mulder, Sacramento, Calif. (2:11.1)
1,500 Yards—Marie Mulder (4:36.5)
100-Meter Hurdles—Cherrie Sherrard, San Francisco (0:13.7)
200-Meter Hurdles—Jennifer Wingerson, Toronto (0:27.5)
440-Yard Relay—Tennessee State B (Mattline Render, Calanthia Rallings, Evelyn Harvey, Wyomia Tyus; 0:46.5)
880-Yard Relay—Cleveland Recreation (Gloria Woods, Debbie McDonald, Nathalie Allen, Madeline Manning; 1:43.9)
High Jump—Eleanor Montgomery, Cleveland Recreation (5 ft 7 in)
Long Jump—Willye White, Chicago Mayor Daley Youth Foundation, Chicago (20 ft 5½ in)
Discus—Lynn Graham, Los Angeles Mercurettes (157 ft 9 in)
Shot Put—Lynn Graham (47 ft 7 in)
Javelin—RaNae Bair, San Diego T.C. (175 ft ½ in)
Team—Tennessee State (68 pts)

Women's AAU Indoor Championships

(New York, February 19–20)

60 Yards—Wyomia Tyus, Tennessee State (0:6.8)
60-Yard Hurdles—Chi Cheng, Taiwan and Los Angeles Mercurettes (0:7.9)
200-Yards—Edith McGuire, Tennessee State (0:21.9)
880 Yards—Abby Hoffman, Toronto Olympic Club (2:11.8)
440 Yards—Janell Smith, Fredonia, Kan., and Norma Harris, Chicago, tie (0:56.5)
640-Yard Relay—Tennessee State (Wyomia Tyus, Essie Crews, Lorraine Dunn, Edith McGuire; 1:11.7)
1,060-Yard Relay—Major Daley Youth Foundation, Chicago (Caroline Fumbanks, Willye White, Mary Hodge, Norma Harris; 2:14)
High Jump—Iolanda Balas, Rumania (5 ft 9 in)
Long Jump—Mrs. Mary Rand, England (20 ft 4 in)
Shot Put—Tamara Press, Russia (57 ft 2½ in)
Basketball Throw—Barbara Friedrich, Spring Lake, N.J. (107 ft 11 in)
Team—Tennessee State (20 pts)

AAU Long-Distance Events

15,000 Meters—Merle McGee, Santa Monica, Calif (45:59.0)
20,000 Meters—Larry Furnell, New York A.C. (1:05:37)
25,000 Meters—Tom Osler, South Jersey T.C. (1:27:08)
30,000 Meters—Lou Castagnola, American U.T.C. (1:41:37.1)
Marathon (Yonkers, N.Y., May 23)—Gar Williams, Arlington, Va. (2:33:50.6)
1-Hour Run—Norman Higgins, Santa Monica, Calif. (11 mi 1,286 yds, 1 ft)
10,000-Meter Walk—John Mortland, Columbus, Ohio (48:19.6)
15,000-Meter Walk—Ron Laird, New York A.C. (1:13:24.8)
20,000-Meter Walk—Ron Laird (1:38:38)
25,000-Meter Walk—Ron Laird (2:01:42)
30,000-Meter Walk—Ron Laird (2:41:17)
35,000-Meter Walk—Ron Laird (3:07:09)
40,000-Meter Walk—Paul Schell, North Medford (4:17:38)
50,000-Meter Walk—Dean Rasmussen, Merchant Marine Academy (5:03:33)
1-Hour Walk—Ron Laird (7 mi 1,432 yds)

Other Events

AAU Decathlon—Bill Toomey, Los Angeles (7,764 pts)
USTFF Decathlon—Phil Mulkey, Birmingham, Ala. (7,008)
AAU Pentathlon—Jim Miller, Colorado U. (3,095 pts)
AAU All-Around—Bill Urban, New York A.C. (7,481 pts)
AAU 56-lb Weight Throw—Bob Backus, New York A.C. (43 ft 9½ in)
Mile Relay—N.Y. Pioneer Club (Vincent Mathews, John Davis, Carl Richardson, Frank Bowens; 3:11.9)
440-Yard Relay—N.Y. Pioneer Club (Lionel Urgan, Willie Pendergast, Julio Meade, Melvin Blenheim, 0:41.9)
2½-Mile Medley Relay—New York A.C. (T. Cracovia, David Perry, Reto Cavelti, John McDonnell; 10:05.3)
Boston Marathon (April 19)—Morio Shigematsu, Japan (2:16.33)

International Competition

U.S.-Russia—*men:* USSR 118, U.S. 112; *women:* USSR 63½, U.S. 43½
U.S.-Poland—*men:* U.S. 118, Poland 93; *women:* U.S. 59, Poland 57
U.S.-West Germany—*men:* U.S. 142, West Germany 91; *women:* U.S. 62, West Germany 55
U.S.-Britain (indoor)—*men;* U.S. 70, Britain 47; *women:* 38½, Britain 33½
U.S.-West Germany (indoor—*men:* U.S. 101, West Germany 56; *women:* U.S. 61, West Germany 52

Intercollegiate Team Champions

NCAA—Oregon and Southern California (tie)
NAIA—Southern University
College Conferences—*Athletic Association of Western Universities:* Oregon; *Atlantic Coast:* Maryland; *Big Eight:* Kansas; *Big Ten:* Michigan State; *Central Intercollegiate AA:* North Carolina College; *Ivy:* Harvard; *Mid-American:* Western Michigan: *Mid-Atlantic:* La Salle; *Missouri Valley:* Drake; *Southeastern:* Tennessee; *Southern:* Furman; *Southwestern:* Rice; *Western:* New Mexico; *Yankee:* Maine

WEIGHT LIFTING

National AAU Championships

(Los Angeles, June 11–12)

123.5-Pound—Gary Hanson, New York (665 lbs)
132.3-Pound—Walter Imahara, New Orleans (790)
148.8-Pound—Homer Brannum, Dallas (820)
165.4-Pound—Tony Garcy, York, Pa. (880)
181.9-Pound—Gary Cleveland, Minneapolis (985)
198.4-Pound—Bill March, York, Pa. (1,020)
Heavyweight—Norbert Schemansky, Dearborn, Mich. (1,555)

World Championships

(Teheran, Iran, October 27–November 2)

Bantamweight—Imre Foldi, Hungary (793 lbs)
Featherweight—Yoshinobu Miyake, Japan (847½)
Lightweight—Waldemar Baszanowski, Poland (940½)
Middleweight—Viktor Kurentsov, Russia (963½)
Lightweight—Norbert Ozimek, Poland (1,040)
Middle Heavyweight—Louis Martin, Great Britain (1,074)
Heavyweight—Leonid Zhabotinsky, USSR (1,217)

WRESTLING

World Championships

Free Style

(Manchester, England, June 1–3)

114.5 Pound—Yoshisha Yoshida, Japan
125.5 Pound—Mohamed Ibrahim Saifpour, Iran
138.5 Pound—Tomiaki Furkuda, Japan
154 Pound—Abdullah Mohaved, Iran
171.5 Pound—Guzam Sagaradze, USSR
191.5 Pound—Mansour Mehdizadeh, Iran
213.5 Pound Light Heavyweight—Ahmet Ayik, Turkey
Heavyweight—Aleksandr Ivanitski, USSR
Team—Iran (30½ pts)

Greco-Roman

(Tampere, Finland, June 6–8)

114.5 Pound—Sergei Rybalko, USSR
125.5 Pound—Ion Cernea, Rumania
138.5 Pound—Yury Grigoriev, USSR
154 Pound—Anatoli Kolessov, USSR
154 Pound—Gennady Sapunov, USSR
171.5 Pound—Anatoli Kolessov, USSR
191.5 Pound—Rimantes Bogdanas, USSR
213.5 Pound—Valery Annissimov, USSR
Heavyweight—Nikolai Chmakov, USSR
Team—Russia (42 pts)

QUEEN OF HELFORD
OH 7013 AR

KEYSTONE

ROBERT MANRY (lower right) receives a big welcome as he arrives at Falmouth, England, in his small sailboat, the *Tinkerbelle*. Manry, a Cleveland *Plain Dealer* copy editor, crossed the Atlantic Ocean alone, from Falmouth, Mass., in 78 days.

National AAU Championships
(San Francisco, April 13–17)

Free-Style

114.5 Pound—Ray Sanchez, Cheyenne, Wyo.
125.5 Pound—Dick Sanders, Multnomah A.C., Portland, Ore.
138.5 Pound—Chick Murano, New York A.C.
154 Pound—Jim Burke, Olympic Club, San Francisco
171.5 Pound—Russ Camilleri, Olympic Club
191.5 Pound—Wayne Baughman, U.S. Air Force
213.5 Pound—Jerry Conone, Multnomah A.C.
Heavyweight—Larry Kristoff, Chicago Wrestling Club
Outstanding Wrestler Award—Russ Camilleri
Team—Multnomah A.C., Portland, Ore.

Greco-Roman

114.5 Pound—Rich Henjyoji, Multnomah A.C.
125.5 Pound—Clem Crow, New York, A.C.
138.5 Pound—Chick Murano, New York, A.C.
154 Pound—Bob Douglas, Oklahoma State U.
171.5 Pound—Russ Camilleri, Olympic Club
191.5 Pound—Wayne Baughman, U.S. Air Force
213.5 Pound—Art Makinster, Oregon State U.
Heavyweight—Garry Stensland, Multnomah A.C.
Team—Olympic Club, San Francisco
Outstanding Wrestler Award—Wayne Baughman

National Collegiate (NCAA) Championships
(Laramie, Wyo., March 25–27)

115 Pounds—Tadaaki Hatta, Oklahoma State
123 Pounds—Mike Caruso, Lehigh
130 Pounds—Yojiro Uetake, Oklahoma State
137 Pounds—Bill Stuart, Lehigh
147 Pounds—Veryl Long, Iowa State
157 Pounds—Bob Kopnisky, Maryland
167 Pounds—Greg Ruth, Oklahoma
177 Pounds—Tom Peckham, Iowa State
191 Pounds—Jack Brisco, Oklahoma State
Heavyweight—Jim Nance, Syracuse
Team—Iowa State (87 pts)

YACHTING

North American Yacht Racing Union Champions

Men (Mallory Cup)—Cornelius Shields, Jr., Larchmont, N.Y.
Women (Adams Trophy)—Timothea S. Larr, New York
Junior (Sears Cup)—Robert Doyle, Marblehead, Mass.
Singlehanded (O'Day Trophy)—Colin Park, North Vancouver, B.C.

Distance Races

Annapolis-Newport—Clayton Ewing's yawl *Dyna*, Easton, Md.
Buenos Aires–Rio de Janeiro—Sumner A. Long's yawl *Ondine*, Larchmont, N.Y.
Chicago–Mackinac—Bill and Tom Schoendorf's cutter *Blitzen*, Milwaukee
Fastnet (England)—Richard Carter's sloop *Rabbit*, Nahant, Mass.
Marblehead–Halifax—Morton H. Engle's yawl *Huntress*, Mamaroneck, N.Y.
Miami-Montego Bay—Robert F. Johnson's ketch *Ticonderoga*, Portland, Ore.
Miami–Nassau—W.C. Byars yawl *Doubloon*, Tampa, Fla.
Port Huron–Mackinac—Charles Kotovic's sloop *Gypsy*, Milwaukee
Transpacific—Don Salisbury's sloop *Psyche*, Los Angeles
Southern Ocean Racing Conference Championship—William Snaith's yawl *Figaro IV*, Stamford, Conn.

One-Design Class Championships

(National unless designated otherwise)

Aqua Cat—Bill LaFontaine, East Norwalk, Conn.
Atlantic—Joseph C. Olson, Cedar Point, Conn.
Blue Jay—Ron Egan, Westport, Conn.
Comet—Bob Seidelmann, Cherry Hill, N.J.
Cougar Catamarans—Warren Crunden, Cedarhurst, L.I.
Day Sailer—Wendell Davis, Boston
Dragon (North American)—Buddy Friedrichs, New Orleans
Ensign—Dr. George Brazill, Larchmont, N.Y.
Finn (North American)—Capt. Dick Tillman, Wright AFB, Dayton, Ohio
5-0-5 (North American)—John Marshall, Greenwich, Conn.
5.5 Meter (World)—Agostino Straulino, Italy
5.5 Meter—H.R.H. Crown Prince Harald, Norway
Flying Dutchman—Harry Sindle, Gloucester, Va.
Highlander (International)—Orville Wood, Cleveland
Lightning (World)—Tom Allen, Buffalo, N.Y.
Luders 16 (International)—Barton Jahncke, New Orleans
Moth (World)—Jean Pierre Roggo, Switzerland
Moth—George Kranich, Ocean City, N.J.
Mercury—Roger Roessler, Santa Barbara, Calif.
National One Design (World)—Matt Haglund, Tawas, Mich.
One Ten—Ron Dougherty, San Diego
Penguin (North American)—Bruce Goldsmith, Skokie, Ill.
Rainbow—George Page, Wilmette, Ill.
Raven—Timothea Schneider Larr, New York
Snipe (World)—Axel and Eric Schmidt, Brazil
Snipe—Harry Levinson, Indianapolis
Star (World)—Donald Bever, Vermillion, Ohio
Star (North American)—John Albrechtson, Sweden
Thistle—Peter Bordes, Brooklyn
Tiger Cat—Douglas McGregor, Cottage Park, Mass.
Two Men—Freeman Chase, Hingham, Mass.
Victory—Jerry Pinckney, Mission Bay, Calif.
Wood Pussy—Stimpson Brown, Oceanport, N.J.

BILL BRADDOCK
Sports Department "New York Herald Tribune"

STAMP COLLECTING

Philatelic records were set in 1965 in the number of new stamps issued by existing and newly created governments. Many neophyte collectors were confused by a market flooded with multicolored stickers from virtually all of the nations that came into existence in the last five years. These included many tiny states, notably in the Arabian Gulf area, which do not have postal services of their own.

There were so many king-size adhesives of unusual shapes and so many stamps with popular-theme designs (for example, space conquest, sports, flora, fauna, Churchill, and John F. Kennedy) that the Universal Postal Union joined the world's serious philatelic organizations in condemning what it described as "scandalous production of paper in the guise of postage stamps." Most of these issues were available only to privileged professionals, however, and were not sold at postoffices.

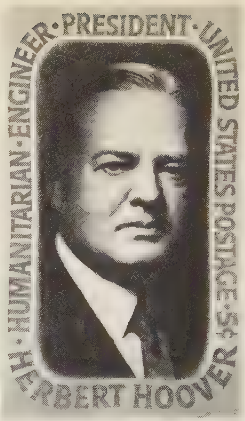
Exhibitions. The greatest stamp show in history was staged in June in Austria. Nearly 500,000 philatelists converged on Vienna to see treasures that filled the Hofburg Palace and National Fair Hall. In New York in February and March, the Pepsi-Cola Company sponsored an unprecedented type of show in which exhibits focused on the variety of postal services employed to carry mail, from ancient Egypt's pigeon-post to modern missiles. The year's philatelic climax was a show in Manila that was part of the observance of the 400th anniversary of the introduction of Christianity in the Philippines.

United Nations. Twentieth-anniversary commemoratives issued by the UN on June 26, 1965, were so popular that a limit of $1.05 worth was imposed. A speculator, trying to corner the market, sent in about 4,000 requests, each with a check for $1.05, but UN postal authorities refused to send the stamps.

New U.S. Issues. The United States issued 16 commemoratives, plus other stamps and postal stationery as follows: 5¢ stamped envelope for regular service (Jan. 5); 1¼¢ and 4¢ stamped envelopes (Jan. 6); 8¢ airmail envelope (Jan. 7); 5¢ Battle of New Orleans sesquicentennial (Jan. 8); 5¢ Sokol commemorative (Feb. 15); 25¢ Paul Revere coil stamp for regular service (Feb. 25); 5¢ Cancer Campaign stamp (April 1); 5¢ Appomattox centennial (April 9); 5¢ Sir Winston Churchill memorial (May 13); 11¢ John F. Kennedy memorial air letter (May 29); 5¢ Magna Carta commemorative (June 15); 5¢ United Nations 20th anniversary commemorative (June 26); 5¢ Salvation Army centennial (July 2); 5¢ Dante Alighieri commemorative (July 17); 4¢ postal card to mark founding of U.S. Coast Guard (Aug. 4); 5¢ Herbert Hoover memorial (Aug. 10); 5¢ Robert Fulton commemorative (Aug. 19); 5¢ commemorative for 400th anniversary of Florida's settlement (Aug. 28); 5¢ traffic safety stamp (Sept. 3); 5¢ John S. Copley stamp in annual "Fine Arts" series (Sept. 17); 11¢ stamp for centenary of International Communications Union (Oct. 6); 4¢ postal card for Census Bureau centenary (Oct. 21); 5¢ Adlai Stevenson memorial (Oct. 23); 5¢ stamp for Christmas mail (Nov. 2); and 4¢ Abraham Lincoln as the first of a new regular series (Nov. 19).

ERNEST A. KEHR
Stamp News Editor, New York "Herald Tribune"

HERBERT C. HOOVER, 31st president of the United States, who died in 1964, was honored by stamp issued in 1965 that shows the official photograph from the 1932 presidential campaign.



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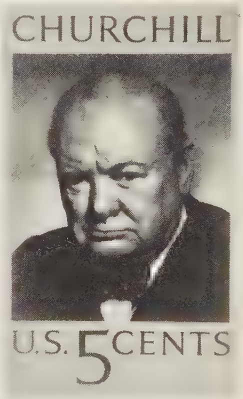
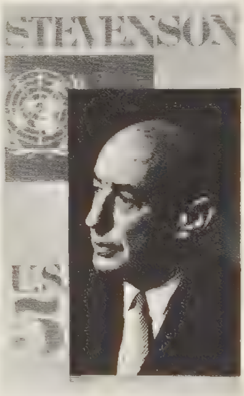


WIDE WORLD

WINSTON S. CHURCHILL, Britain's great prime minister and an honorary citizen of the United States, was memorialized by a U.S. stamp issued in 1965 after his death on January 24.

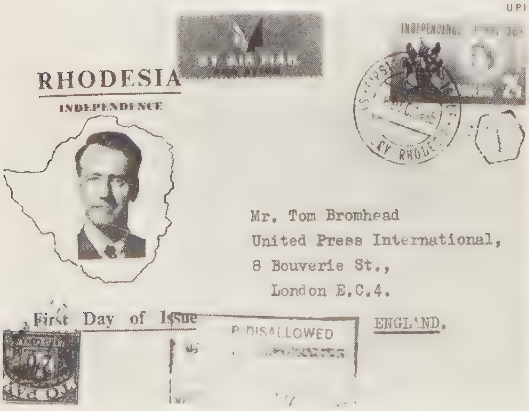
ADLAI E. STEVENSON appeared on memorial stamp issued after his death in 1965. UN flag in the background pays tribute to Stevenson's long-time service to the world organization.



WIDE WORLD

FIRST-DAY COVER FROM RHODESIA, dated Dec. 8, 1965, proclaims country's independence from Britain on November 11. Envelope features photo of Prime Minister Ian Smith within an outline map of Rhodesia. British postal authorities in London marked the envelope "Stamp Disallowed" and collected postage in full from the recipient.

UPI


RHODESIA
INDEPENDENCE

Mr. Tom Bromhead
United Press International,
8 Bouverie St.,
London E.C.4.

First Day of Issue
ENGLAND.
P DISALLOWED
BY AIR MAIL
INDEPENDENCE

STEEL

World steel production increased in 1965, largely as the result of plant modernization and changes in steelmaking processes, particularly the increased use of the basic oxygen process.

Production. Crude steel production in the United States in 1965 totaled 131,200,000 net tons—a record and a gain of 4,124,000 tons, or 3.2%, over 1964. The U.S. steel industry planned to spend a record $1.9 billion in 1965 on modernization and expansion programs.

World production of crude steel in 1964 totaled 478,222,000 net tons, up from 422,239,000 tons in 1963.

PRODUCTION OF IRON ORE, PIG IRON AND FERROALLOYS, AND STEEL INGOTS AND STEEL FOR CASTINGS

Country	1964 Iron ore, concentrates and agglomerates (Gross tons: 2,240 lb)	1964 Pig iron and ferroalloys (Net tons: 2,000 lb)	1964 Steel ingots and steel for castings (Net tons: 2,000 lb)
Algeria	2,234,000	...	...
Angola	837,000	...	...
Argentina	118,000	606,000	1,399,000
Australia	5,905,000	4,431,000	5,622,000
Austria	3,533,000	2,431,000	3,521,000
Belgium	60,000	8,940,000	14,641,000[1]
Brazil	11,072,000	2,756,000	4,290,000
Bulgaria	689,000	386,000	523,000
Canada	31,494,000	6,293,000	9,131,000
Chile	8,956,000	485,000	610,000
China, Communist	49,210,000[2]	14,330,000	11,000,000
China, Nationalist	...	61,000	220,000
Colombia	492,000	243,000	240,000
Cuba	15,000	...	50,000
Czechoslovakia	3,051,000	6,261,000	9,234,000
Denmark	354,000	80,000	456,000
Dominican Republic	138,000	...	...
Finland	768,000	507,000	389,000
France	60,501,000	17,465,000	21,803,000
Germany, East	1,624,000	2,491,000	4,242,000
Germany, West	11,430,000	29,963,000[3]	41,158,000
Great Britain	16,324,000	19,346,000	29,376,000
Greece	...	...	230,000
Guinea	738,000	...	...
Hong Kong	118,000	...	...
Hungary	768,000	1,653,000	2,606,000
India	19,684,000	7,088,000	6,483,000
Ireland	...	...	44,000
Israel	...	...	72,000
Italy	1,545,000	3,873,000	10,783,000
Japan	2,510,000	26,202,000	43,860,000
Korea, North	4,134,000	992,000	882,000
Korea, South	...	7,000	153,000
Lebanon	10,000	...	20,000
Liberia	11,614,000	...	...
Luxembourg	6,575,000	4,607,000	...[4]
Malaya	6,791,000	...	...
Mexico	2,264,000	981,000	2,590,000
Morocco	886,000	...	...
Netherlands	...	2,146,000	2,917,000
New Caledonia	295,000	...	...
New Zealand	3,000	...	...
Norway	2,254,000	953,000	679,000
Pakistan	5,000	...	13,000
Peru	5,413,000	33,000	84,000
Philippines	1,427,000	...	100,000
Poland	2,628,000	5,787,000	9,449,000
Portugal	207,000	303,000	270,000
Rhodesia	640,000	287,000	100,000
Rumania	1,772,000	1,929,000	3,241,000
Sierra Leone	2,165,000	...	...
South Africa	4,626,000	2,888,000	3,414,000
Spain	5,216,000	2,072,000	2,921,000
Sweden	26,116,000	2,424,000	4,945,000
Switzerland	79,000	50,000	335,000
Thailand	133,000	...	...
Tunisia	876,000	...	...
Turkey	591,000	397,000	446,000
USSR	142,710,000	68,089,000	93,917,000
United Arab Republics	246,000	...	200,000
United States	81,328,000	87,932,000	127,076,000[5]
Venezuela	13,680,000	331,000	393,000
Yugoslavia	2,204,000	1,113,000	1,849,000
Other countries	...	...	245,000
Total (estimate)[6]	561,056,000	339,212,000	478,222,000

[1] Figure includes data for Luxembourg. [2] Estimate. [3] Includes the Saar. [4] Included under Belgium. [5] United States data exclude 1,380,224 net tons of steel produced by foundries which reported their output to the Bureau of the Census but did not report to American Iron and Steel Institute. [6] Detail does not necessarily add to totals because of rounded figures. Sources: Statistical Quarterly Report for Iron and Steel Industry, West Germany Iron and Steel Federation, Düsseldorf: American Iron and Steel Institute: New York.

Basic Oxygen Process. In January 1965, the annual capacity for steelmaking by the basic oxygen process, also known as the LD (Linz-Donawitz) process, totaled 68,168,000 metric tons in 29 countries. In 1965, an additional capacity of 54,090,000 metric tons by that process was under construction or planned.

Taconite Production in Minnesota. Minnesota's annual capacity to produce taconite pellets containing 60 to 70% iron is expected to reach 30 million tons by December 1968. This increase was made possible by the passage in 1964 of an amendment to the state constitution under which for 25 years the taconite mining industry will not be taxed at a higher rate than that imposed on other industries.

U.S. Technical Developments. In the United States, the U.S. Steel Corporation and the Jones and Laughlin Steel Corporation reported new processes for coating steel with aluminum and other metals by vapor deposition in a vacuum chamber. In addition, U.S. Steel installed a mill at its Gary, Ind., plant to roll steel foil down to 0.001 inch in thickness.

The American Can Company developed a tinless steel can for beverages. Inland Steel Company reported a low-carbon steel product, called Martensitic steel. It was claimed that in sheet form for can manufacture, this product is the strongest type of steel (100,000 to 230,000 pounds per square inch tensile strength) produced outside the laboratory. (See also CHEMISTRY.)

Canada. In 1965, the Steel Company of Canada began a $100 million plant expansion to increase its pig iron and steelmaking capacity. The company also announced a major development in the basic open hearth process by which 15 heats of steel, totaling 2,310 net tons, can be produced in one day in a dual hearth furnace.

Western Canada's first completely integrated steelmaking plant was under construction at Kimberley, B.C., by Consolidating Mining & Smelting Company of Canada. A new iron ore concentration plant was tested by Wabush Mines at Wabush Lake, Labr. The plant was designed to process 13,300,000 long tons of ore annually, yielding 5,300,000 long tons of iron concentrate containing at least 66% iron.

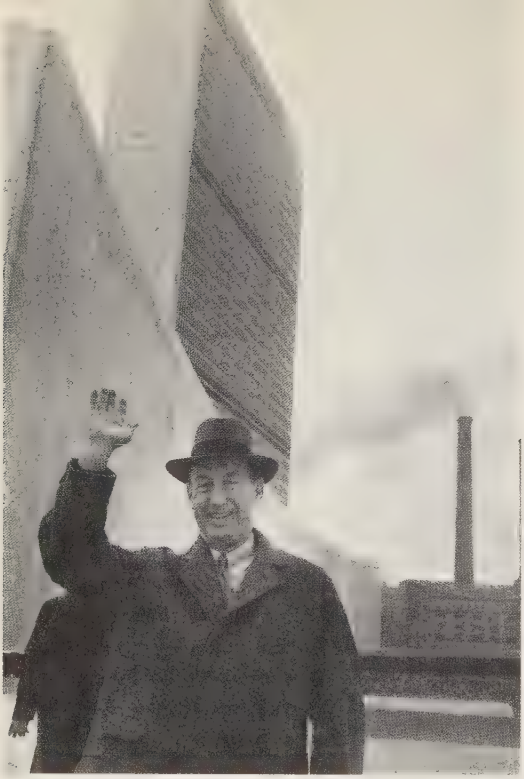
Australia. On Feb. 1, 1965, American Metal Climax announced an agreement to sell, through an Australian affiliate, 100 million tons of high-grade Australian ore to Japanese steel producers. The sale, to continue over a 22-year period, amounts to almost $1 billion. The company also planned to develop the 270-million-ton Mount Newman iron ore deposits in northwestern Australia, in which it has a 55% interest, at an estimated cost of $160 million.

Belgium. In Belgium, at Marchienne-au-Pont, the Centre National de Recherches Métallurgiques and the S.A. des Forges de la Providence developed a new 35-metric-ton converter which combines features of the LD and Kaldo steelmaking converters. The new converter is in the LD vertical position during high-speed refining, after which it is inclined and rotated like the Kaldo converted for close control of the finishing operation.

Britain. In England, the English Steel Corporation disclosed a process for making steel from scrap by means of a plasma arc.

Labor-Management Agreement. On Sept. 6, 1965, the United Steelworkers of America and 10 steel companies signed new labor contracts to run until at least August 1968. The new contract provided for an hourly employment cost increase of over 48 cents over the next three years. (See LABOR.)

JOHN W.W. SULLIVAN
Metallurgical Engineer
American Iron and Steel Institute


UPI

AMBASSADOR ADLAI E. STEVENSON stands outside the UN General Assembly building in 1961, shortly after his appointment to head the U.S. delegation to the United Nations.

STEVENSON, Adlai E(wing)

U.S. political leader and diplomat: b. Los Angeles, Calif., Feb. 5, 1900; d. London, England, July 14, 1965.

Stevenson's significance lay chiefly in his efforts to raise the level of political debate in the United States. His approach was to shun emotionalism and expediency and to appeal to reason. As a speaker, he had an unusual command of language and a sharp and subtle wit. His eloquent speeches and statements were directed toward educating Americans on the nature of the world in which they lived and the challenges that faced them in it. Unsuccessful in two presidential campaigns, Stevenson never dominated United States politics, but he did affect the ways in which Americans viewed and discussed public affairs.

Family Background. Stevenson's family background made participation in politics almost inevitable. His grandfather, the first Adlai E. Stevenson, had served as vice president in Grover Cleveland's second administration. Pride in family achievements, talk of politics, and the presence of politicians were features of the Bloomington, Ill., home in which the second Adlai was raised. He traveled extensively in America and Europe and was educated at the Choate School and at Princeton (B.A. 1922), Harvard, and Northwestern (L.L.D. 1926) universities. His marriage in 1928 to Ellen Borden was terminated by divorce in 1949; the couple had three sons.

Early Government Service. Stevenson's government career began with federal agency posts in the New Deal era. But even in the early 1930's, his chief interest was foreign affairs. During World War II he served as assistant to the secretary of the navy, and in 1945 he joined the State Department and participated in the preparatory conferences leading to the foundation of the United Nations. He was a UN delegate in 1946 and 1947.

Governor of Illinois. Stevenson was elected Democratic governor of Illinois in 1948. In this first candidacy for public office, he achieved his only victory at the polls, winning by a margin far greater than Harry S Truman, the party's presidential candidate, got in Illinois. During his four-year administration, Stevenson drew able people into the state government and improved the police, highways, educational, and welfare systems.

First Presidential Campaign. Stevenson's electoral triumph and his record as governor aroused national interest in him as a prospective Democratic presidential candidate for the 1952 election. Although he preferred to serve a second term as governor, he accepted a draft to oppose the Republican candidate, Dwight D. Eisenhower.

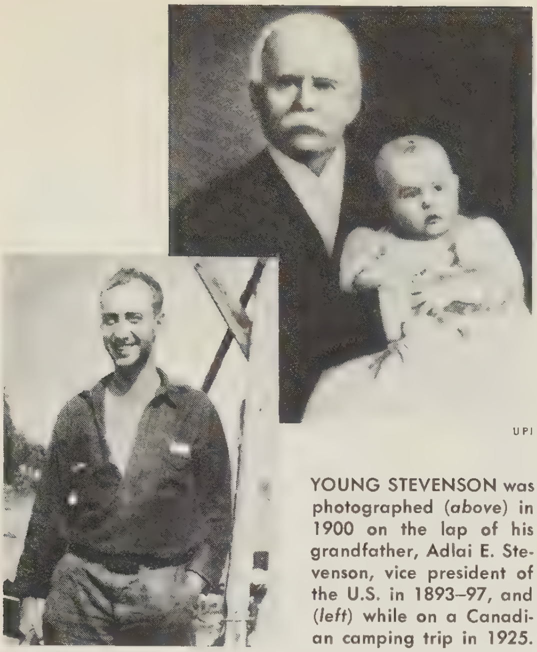
Stevenson's campaign enlarged his circle of enthusiastic followers, but failed to produce victory. He defended Truman's foreign policy of containment, but rejected the president's "give 'em hell" political technique in favor of "talking sense" to the American people. His earnest speeches, however, could not compensate for his opponent's advantages: Eisenhower was a national hero, and there was widespread confidence in his ability in foreign affairs, whereas Truman's foreign policy was unpopular. Stevenson captured only nine states, which accounted for 89 of the 531 electoral votes. Defeated, Stevenson said that he felt as Abraham Lincoln had

TWICE NOMINATED for the presidency by the Democratic National Convention, Stevenson is shown (*below*) in 1952 with his running mate, Sen. John Sparkman of Alabama, and (*right*) in 1956 with running mate Sen. Estes Kefauver of Tennessee.

WIDE WORLD

WIDE WORLD

VERMONT
NEW J
ILLINOIS
MISSO



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YOUNG STEVENSON was photographed (*above*) in 1900 on the lap of his grandfather, Adlai E. Stevenson, vice president of the U.S. in 1893–97, and (*left*) while on a Canadian camping trip in 1925.

on a similar occasion: "like a little boy who had stubbed his toe in the dark . . . he was too old to cry, but it hurt too much to laugh."

After the election, Stevenson continued to play a large political role as titular leader of the Democratic party. He traveled widely, spoke frequently, and criticized the Eisenhower administration vigorously. He maintained that the administration was weakening the vital Western alliance and not doing enough to promote economic development and to combat Communist influence in the underdeveloped areas. "There are no magic, cheap, short solutions to global conflicts long in the making," he advised.

Second Campaign. In 1956, Stevenson was not a reluctant candidate. He vigorously pursued the nomination in state primaries and secured it on the first ballot at the Democratic National Convention. Against Eisenhower, however, he was less successful than in 1952, capturing only 73 electoral votes. Rejecting advice to stress domestic issues, he based his campaign on foreign policy, only to find that confidence in Eisenhower had not declined. Even more than in 1952, Stevenson lost despite the popularity of his party and because he could not match Eisenhower's personal appeal. In 1952 the Republicans had won the congressional elections by a small margin; in 1956 they lost their majority in Congress even though Eisenhower's margin of victory was larger than before.

Despite defeat, Stevenson remained a man of influence. He expressed the sense of crisis that many Americans felt after 1956: "Our Russian competitors are much tougher than most of us have yet realized—and . . . this time we might get licked," he warned, "unless we are willing to change our habits, our political behavior and our complacent outlook on the world." He emphasized two themes —halting the arms race and promoting economic development in Asia and Africa.

By 1960, Stevenson's ideas were widely accepted, and many admirers sought his third nomination. Reluctant to engage in political battles again, he bowed to pressure and became a candidate for the Democratic nomination, but was defeated by the hard-driving John F. Kennedy.

Ambassador to the United Nations. Stevenson, who had helped his party return to the White House, was rewarded, not with the office of secretary of state that he wanted, but with appointment as ambassador to the United Nations. He accepted with the understanding that he would help shape policy. In 1963 the Kennedy administration took a step he had long advocated by signing a treaty banning nuclear testing in the atmosphere.

For four and one-half years, Stevenson battled to strengthen the world organization. While employing his prestige as spokesman for the American position, he also brought the United Nation's point of view to his own government.

Stevenson played a secondary role in policy making under the administrations of Presidents Kennedy and Lyndon B. Johnson. Although some American policies troubled him, he resisted pressure from admirers to resign, and publicly defended them. One of his last acts before his sudden death of a heart attack in London was to defend U.S. involvement in the war in Vietnam in a BBC broadcast.

Writings. Stevenson's eloquence and wit are evident in his publications, which include: *Call to Greatness* (1954), *What I Think* (1956), *The New America* (1957), *Putting First Things First: A Democratic View* (1960), and *Looking Outward* (1963).

RICHARD S. KIRKENDALL
Associate Professor of History
University of Missouri

Bibliography. Johnson, Walter, *How We Drafted Adlai Stevenson* (New York 1955); Davis, Kenneth S., *A Prophet in His Own Country: The Triumphs and Defeats of Adlai E. Stevenson* (New York 1957); Thomson, Charles A.H., and Shattuck, Frances M., *The 1956 Presidential Campaign* (Washington 1960); Brown, Stuart Gerry, *Conscience in Politics: Adlai E. Stevenson in the 1950's* (Syracuse, N.Y., 1961).

UPI

FLAG-DRAPED CATAFALQUE bearing the body of Adlai E. Stevenson stands in the rotunda of the Illinois state Capitol at Springfield, where he presided as governor from 1949 to 1953. Burial was at his home town, Bloomington, Ill., on July 19, 1965.

STEWART, Michael. See biographical sketch under GREAT BRITAIN.

STOCKS AND BONDS

Stock prices generally advanced in 1965, continuing the long upswing that began in 1962. However, the rise was not as smooth as that of recent years, as evidenced by a sharp but temporary decline in May and June. While stocks advanced, the bond market for the most part exhibited weakness during the year.

Stock Prices. Stock prices, as measured by the Standard & Poor's index of 425 industrial companies, rose, with only minor interruptions, between January and May, when record levels were reached. Prices then suddenly turned downward for a brief period, dropping by an average of about 10% before resuming their advance. By October, the industrial price index again reached a record high.

Market action in 1965, in terms of the Standard & Poor's stock price indexes (1941–43 = 100), is shown in the following table (which includes 1964 ranges for comparative purposes):

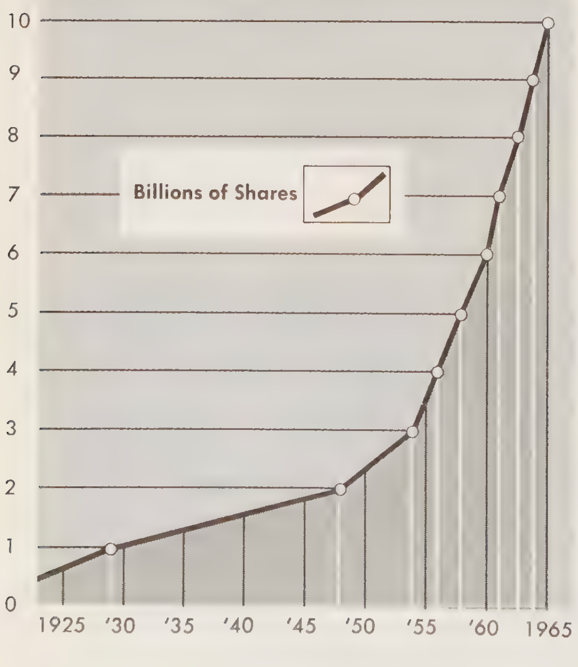
Date[1]	Industrials	Rails	Utilities	500 stocks
1964 low......Jan. 2	79.74	40.54	66.36	75.43
1964 high.....Nov. 20	91.29	49.87	74.97	86.28
1965 low......June 28	86.43	41.06	72.03	81.60
1965 high.....Nov. 15	98.55	51.09	78.20	92.63
1965 close....Dec. 31	98.47	51.28	75.51	92.43

[1] Dates are for industrials. Rail and utility highs and lows in some instances occurred on other dates.

Although the stock price indexes recorded new highs in 1965, some issues failed to participate in the advance. Of 1,640 issues traded on the New York Stock Exchange, 904 posted net gains for the year, while 519 scored net declines.

The volume of trading on the New York Stock Exchange reached a new record of 1,556,266,481 shares, 26% higher than in 1964. Total trading by the first week of November exceeded the 1,236,565,000 shares traded in all of 1964.

NUMBER OF SHARES LISTED ON NEW YORK STOCK EXCHANGE



Stock Purchases. Preliminary evidence indicated that institutions continued to make sizable net increases in their common stock holdings in 1965. At the same time, the odd-lot figures, which show dealings in less than 100-share lots, indicated that the public was rather consistently on the selling side of the market.

The favorable earnings performance of most companies contributed to the general upward trend of the stock market. Many industries operated at high levels of capacity, and corporate earnings rose substantially. In terms of the industrial stock price index, net income (partly estimated) was approximately $5.50 per share, a new record high and almost 14% above the $4.83 per share of 1964.

In addition, there was widespread confidence that 1966 would bring further gains. This view was attributable in part to the belief that the nation's economy would be bolstered by increased federal government expenditures for the military commitment in Vietnam and by additional appropriations for new domestic programs.

Another factor of strength in the market was the absence of competition from new stock offerings. In the first nine months of 1965, $1.2 billion of new common stocks were offered—only half the total for the same period in 1964.

Dividends. Dividends also increased in 1965, reaching the equivalent of approximately $2.90 per share on the Standard & Poor's index, compared with $2.60 per share in 1964. At the 1965 high, common stocks were sold at an average price 17.9 times their earnings, with an average dividend return of slightly less than 3%.

Bond Prices. In contrast to the buoyancy exhibited by most stock prices, bond prices were generally weak in 1965. Long-term government bonds, for example, moved from an average 4.16% yield basis early in the year to about 4.49% in early December. During the same period, yields on high-grade utility bonds rose from 4.37% to 4.75%.

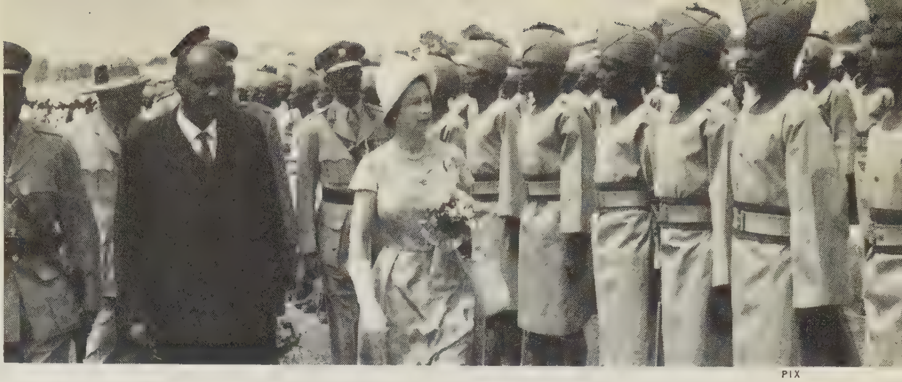
Credit and Interest Rate Influences. The primary factor responsible for the higher interest rates was the surge in demand for credit. Consumer optimism was high, and individuals borrowed freely. Corporations turned increasingly to external financing to support their expanded plant and equipment outlays, larger inventories, and receivables.

Loans of Federal Reserve member banks rose $9.5 billion in the first nine months of 1965, nearly twice the gain for the same period of 1964. Two thirds of this increase was for advances to commercial and industrial borrowers. The volume of corporate bond offerings reached $10.2 billion in the period through Sept. 30, 1965, a gain of 32% over the offerings in the comparable period of 1964.

Along with demand influences, other factors exerted pressure on the money market. Net free reserves of the banking system were allowed to contract from positive levels early in the year to a net borrowed position ranging from $100 million to $200 million later in the year. In December the Federal Reserve raised its discount rate to 4½%. This action caused the prime bank rate to advance to 5%. The expectation that the federal government might find it necessary to borrow additional funds in 1966 also had the effect of boosting interest rates.

LEWIS L. SCHELLBACH
Senior Vice President
Standard & Poor's Corporation

STRIKES AND WALKOUTS. See LABOR.



ON A VISIT TO SUDAN in February, Queen Elizabeth II of Britain inspects honor guard at Roseires. The queen toured the site of Roseires Dam, which was nearing completion on the Blue Nile River.

PIX

SUDAN

Relations between the predominantly Muslim-Arab northern region and the pagan- or Christian-African southern region of the Sudan deteriorated in 1965. Although there were efforts at negotiation and compromise early in the year, by summer the guerrilla warfare in the south had reached its most dangerous stage in the 10-year rebellion.

Negotiation Efforts. In December 1964 a government delegation went to Uganda to negotiate an amnesty with exiled leaders of the Sudan African National Union (SANU), the principal spokesmen for southern aspirations, and to arrange a conference to discuss southern problems. Although originally scheduled to meet at Juba in February 1965, the conference was postponed until March and moved to Khartoum because of the government's failure to arrange a cease-fire with the Anya Nya, a southern Sudanese terrorist organization.

The Khartoum conference of March 16–29 was attended by all principal groups from the north and south, as well as observers from other African states. The conference exposed not only the differences between north and south but also those among the southerners, some of whom demanded separation from the Sudan and others, autonomy within it. The northerners insisted upon national unity, although they were willing to accept some devolution of power. Despite the intransigence of both sides, the conferees agreed to send a peace commission to the south.

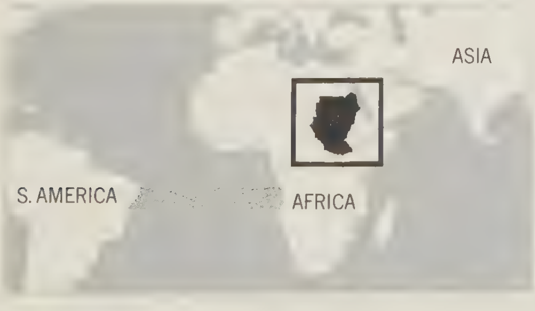
New Government. Although the north-south controversy remained unresolved, the transitional government of Premier Sir-el-Khatim el-Khalifa decided to hold elections for the Constituent Assembly in the north, while postponing them in the south. Anti-election riots in the eastern Sudan claimed 18 lives, but the voting took place between April 21 and May 8. The results gave the right-wing Umma party 74 of the 171 seats and the National Unionist party (NUP) 49 seats, with the rest split among minor parties.

When the new assembly convened on June 10, the two leading parties formed a coalition and elected former Foreign Minister Mohammed Ahmed Mahgoub of the Umma party as premier. Early in December a Communist's blasphemous public statement about the prophet Mohammed gave the government a pretext for outlawing the Communist party, the largest of the minority parties, and banning Communist deputies.

Civil War Resumes. The fragile truce achieved during the spring negotiations was shattered by July, and clashes between government forces and rebels were reported almost daily during the summer. After the elections, the mood of conciliation disappeared as both sides hardened their positions. The leadership of SANU passed from the more moderate William Deng to the militant Aggrey Jaden, and a new separatist group, the Azania Liberation Front, was formed by other radical southerners. The government resolved to step up its offensive against the guerrillas.

Aid to Insurgents. On a goodwill tour in early August, Premier Mahgoub received assurances from Kenya, Tanzania, and Ethiopia that they would prevent Sudanese insurgents from operating in their

SUDAN · Information Highlights



Area: 967,498 square miles.

Population: 13,540,000 (July 1, 1965 est.).

Chief Cities (1964 est.) Khartoum, the capital, 138,000; Omdurman, 171,000.

Government: *President of Supreme Council*—Ismail al'Azhari (took office June 10, 1965); *Premier*—Mohammed Ahmed Mahgoub (took office June 10, 1965). *Parliament*—Constituent Assembly, 233 members; party seating (1965)—Umma, 85; National Unionist, 56; Communists, 11; others, 21; vacant, 60.

Religious Faiths: Muslims, 65% of population; Animists, 25%; Roman Catholics, 4%; others, 6%.

Education: *Total school enrollment* (1961)—411,203 (primary, 335,079; secondary, 67,696; teacher-training, 961; technical, 2,821; higher, 4,646).

Finance (1965 est.): *Revenues,* $211,000,000; *expenditures* $257,000,000; *monetary unit,* Sudanese pound, (0.3482 pound equals U.S.$1).

Gross National Product (1963): $1,322,000,000.

National Income (1963): $1,175,000,000; average annual income per person, $92.

Cost of Living Index (1964): 120 (1958=100).

Manufacturing (metric tons): Cement (1964), 100,000; sugar (1963), 19,000; beer (1963), 70,000 hectoliters.

Crops (metric tons, 1963–64 crop year): Cottonseed (1964–65), 309,000 (ranks 9th among world producers); peanuts, 273,000 (rank, 10th); sesame (1964–65), 174,000.

Minerals (metric tons): Salt (1964), 37,000; iron ore (1962), 20,000; chromite (1963), 17,000; gypsum (1963), 4,520; manganese (1962), 1,016; vermiculite (1962), 50; gold (1964), 877 troy ounces.

Foreign Trade (1964): *Exports,* $196,000,000 (chief exports: cotton, $93,000,000; gum arabic, $19,000,000); *imports,* $268,000,000 (chief imports, 1963: nonelectrical machinery, $28,000,000; refined sugar, $21,200,000; motor vehicles, $21,200,000). *Chief trading partners* (1963): Britain (took 13% of exports, supplied 27% of imports); West Germany (took 11% of exports, supplied 7% of imports).

Transportation: *Roads* (1964), 5,032 miles (132 paved); *motor vehicles* (1964), 33,000 (automobiles, 18,000); *railways* (1963), 2,954 miles; *merchant vessels* (1964), 3 (14,000 gross registered tons); *government airline,* Sudan Airways; *principal airport,* Khartoum.

Communications: *Telephones* (1964): 32,746; *television stations* (1964), 1; *television sets* (1964), 10,000; *radios* (1960), 11,000; *newspapers* (1962), 7 (daily circulation, 64,000).

territories. However, the government believed that rebels were still receiving weapons by way of the Congo (Léopoldville) and Uganda. At one point, the Sudan threatened to break relations with the United States, Britain, and Belgium for allegedly aiding the Sudanese rebels.

Economy. In January 1965 the Agency for International Development agreed to help finance road construction in the Sudan. In the same month Czechoslovakia granted $10 million in credit for the purchase of irrigation and construction equipment. A poor 1964 cotton crop had led to a decline in Sudan's exports to $196 million, from $226 million in 1963. In 1965, Sudanese cotton found markets in Communist China and eastern European countries. Nevertheless, the International Monetary Fund had to make $11 million available to help the Sudan meet its payment difficulties.

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SUGAR

Sugar production in the mainland United States declined in 1965, following four consecutive record crops. Preliminary estimates placed the output of sugar beets and sugarcane at 34,042,000 tons, or 9% below the 1964 crop of 37,749,000 tons, but 20% above the 1959–63 average of 28,339,000 tons. The total 1965 crop, including that of Hawaii, was 44,782,000 tons, or 8% below 1964, but 18% above the 1959–63 average.

Sugar beet production, estimated at 20,935,000 tons, was 10% below the record crop of 23,389,000 tons harvested in 1964, but 13% above average. The mainland sugarcane crop of 13,107,000 tons was down 9% from the 14,360,000-ton record set in 1964, but 24% above average. Including the Hawaii crop, the 1965 total was 23,847,000 tons, or 5% below the 1964 record of 25,053,000 tons, but 23% above average.

U.S. SUGAR PRODUCTION: BEETS AND CANE
(In tons)

State	Average 1959–63	1964	Preliminary 1965
Sugar beets:			
California	4,924,000	7,439,000	6,497,000
Idaho	2,307,000	2,817,000	2,793,000
Colorado	2,695,000	2,783,000	2,101,000
Washington	1,153,000	1,380,000	1,360,000
Minnesota	1,151,000	1,325,000	1,350,000
Michigan	1,135,000	1,386,000	1,133,000
Nebraska	1,204,000	1,407,000	898,000
North Dakota	567,000	568,000	701,000
Montana	914,000	973,000	745,000
Wyoming	714,000	864,000	665,000
Texas	36,000	525,000	570,000
Utah	464,000	427,000	522,000
Ohio	357,000	401,000	599,000
Oregon	500,000	454,000	439,000
Kansas	201,000	364,000	312,000
Other States	181,000	276,000	250,000
United States	18,544,000	23,389,000	20,935,000
Sugarcane:			
Hawaii	9,641,000	10,693,000	10,740,000
Louisiana	6,885,000	7,830,000	7,356,000
Florida	2,910,000	6,530,000	5,751,000
United States	19,436,000	25,053,000	23,847,000

Increases in average 1965 yields were not great enough to offset acreage reductions. Mainland sugarcane was harvested from an estimated 506,000 acres, or 11% less than the 1964 acreage, but 34% more than the 1959–63 average. Hawaii's 115,900 acres brought total U.S. sugarcane acreage to 621,900, or 9% below 1964. Harvested sugar beet acreage of 1,251,900 dropped 10% below 1964, but exceeded the 1959–63 average of 1,055,500 acres by 19%.

The sugar beet yield per acre was estimated at 16.7 tons, down from 16.8 tons in 1964 and down from the 1959–63 average of 17.6 tons. The sugarcane yield, including that of Hawaii, averaged 38.3 tons, compared with 36.6 tons in 1964 and the 1959–63 average of 39.8 tons.

CENTRIFUGAL SUGAR PRODUCTION BY MAJOR COUNTRIES[1]
(In tons, raw value)

Country	Average 1955–56 to 1959–60	1964–65	Preliminary 1965–66
Argentina	906,000	1,077,000	1,227,000
Australia	1,428,000	2,132,000	2,128,000
Brazil	3,110,000	4,152,000	4,577,000
Britain	818,000	1,130,000	1,002,000
China, Communist[2]	836,000	1,318,000	1,350,000
China, Nationalist	963,000	953,000	1,090,000
Cuba	5,883,000	6,600,000	6,600,000
Czechoslovakia	860,000	1,201,000	1,111,000
Dominican Republic	883,000	900,000	900,000
France[3]	1,571,000	2,645,000	2,576,000
Germany, East	804,000	883,000	860,000
Germany, West[3]	1,590,000	2,310,000	1,797,000
India	2,737,000	4,215,000	4,624,000
Indonesia	903,000	715,000	770,000
Italy[3]	1,271,000	1,020,000	1,210,000
Mexico	1,380,000	2,280,000	2,541,000
Peru	800,000	881,000	904,000
Philippines	1,356,000	1,736,000	1,967,000
Poland	1,152,000	1,975,000	1,925,000
Puerto Rico	1,036,000	897,000	1,000,000
South Africa	989,000	1,395,000	1,075,000
USSR[3]	5,632,000	11,270,000	9,350,000
U.S. (Hawaii only)	1,013,000	1,200,000	1,200,000
U.S. (mainland):			
Beet	2,088,000	3,320,000	3,000,000
Cane	572,000	1,147,000	1,100,000
World:			
Beet	20,264,000	33,095,000	28,930,000
Cane	29,324,000	38,897,000	41,061,000
Total	49,588,000	71,992,000	69,991,000

[1] Centrifugal sugar includes cane and beet sugar produced by the centrifugal processes, and is the principal kind used in international trade. The production of each country is credited to the May–April year in which harvesting and sugar production began. [2] Cane and beet sugar. [3] Beet sugar.

World sugar production for the 1965–66 crop year was estimated at 70 million short tons (raw value), second only to the 72 million tons produced in 1964–65. Larger crops were indicated for Mexico, Brazil, India, and the Philippines. Production was down in the Soviet Union, West Germany, and the Republic of South Africa.

RAY REIMAN
President, Farm Business, Inc.

SUKARNO. See biographical sketch under INDONESIA.

SULFUR. See MINING—*Mineral Production*.

SUPREME COURT

Justice Arthur J. Goldberg, who was appointed to the Supreme Court by President Kennedy in 1962, resigned on July 20, 1965, to accept appointment by President Johnson as ambassador to the United Nations. He was succeeded on October 4 by Justice Abe Fortas, a member of a Washington, D.C., law firm.

Other members of the present Supreme Court are: Chief Justice Earl Warren, 74, appointed by President Eisenhower in 1953; Hugo L. Black, 79, the senior associate justice, who was appointed by President Roosevelt in 1937; William O. Douglas, 67, appointed by President Roosevelt in 1939; Tom C. Clark, 66, appointed by President Truman in 1949; John Marshall Harlan, 66, appointed by President Eisenhower in 1954; William Brennan, 59, appointed by President Eisenhower in 1956; Potter Stewart, 50, appointed by President Eisenhower in 1958; and Byron R. White, 48, appointed by President Kennedy in 1962.

UPI

U.S. SUPREME COURT members in 1965: (back row, l. to r.) Associate Justices White, Brennan, Stewart, and Fortas; (front row) Associate Justices Clark and Black, Chief Justice Warren, and Associate Justices Douglas and Harlan.

ABE FORTAS succeeded Arthur J. Goldberg as an associate justice of the U.S. Supreme Court on Oct. 4, 1965. A close friend and adviser of President Johnson, Fortas had come to public attention as a lawyer after winning two landmark decisions in criminal cases. One was a federal court ruling in 1954 that "an accused is not criminally responsible if his unlawful act was the product of mental disease or defect." This ruling led many states to broaden their tests of responsibility. The other decision, made by the Supreme Court in 1963, was that states must provide free counsel to poor defendants in criminal cases.

Fortas, a native of Memphis, Tenn., was born on June 19, 1910. After graduating from Yale Law School in 1933, he was an attorney for several federal agencies. From 1942 to 1946 he was undersecretary of the interior. He is a cofounder of an important Washington law firm which specializes in advising large corporations and in representing them before appellate courts. Fortas married Carolyn Eugenia Agger in 1935. She is also a lawyer.

During the term which began in October 1964 and ended in June 1965, the court handed down 122 opinions, of which 17 were *per curiam* (opinions unsigned by a justice, and usually shorter than regular opinions). There were 58 dissenting opinions, of which the most (12 each) were filed by Justices Black and Harlan. Chief Justice Warren and Justice Brennan filed no dissenting opinions. Justice Harlan wrote the most opinions of the court (12); Justice Stewart wrote nine opinions, and each of the other justices wrote ten. The court disposed of 2,180 cases during the 1964–65 term, leaving 482 cases on the docket at the end of the term. For a review of the Supreme Court's principal decisions in 1964–65, see LAW.

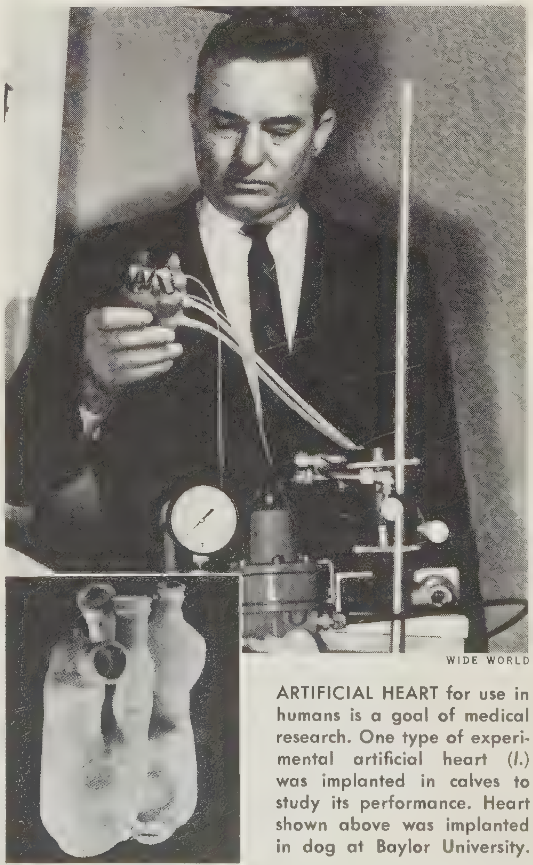
RICHARD L. HIRSHBERG
Attorney at Law

SURGERY

The successful removal of President Lyndon B. Johnson's gall bladder attracted national attention in 1965. The operation also included the removal of a kidney stone. Four surgeons, two physicians, a heart specialist, and an anesthesiologist formed the medical team that operated on the president at the Bethesda Naval Hospital, Bethesda, Md.

Significant developments in surgery during the year included further progress in combating coronary artery disease, stomach ulcers and injuries, liver damage, and burns.

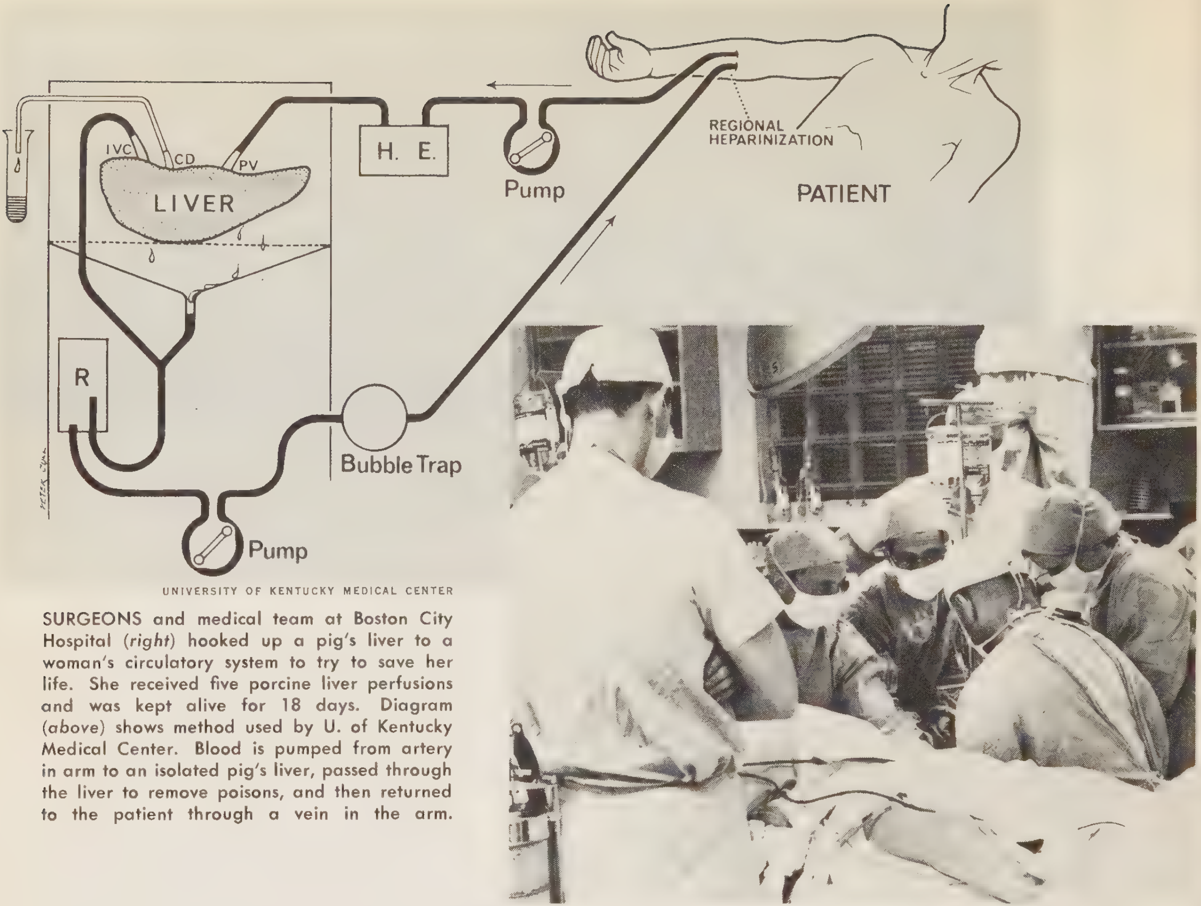
Coronary Artery Disease. In 1965 the President's Committee on Heart Disease, Cancer, and Stroke, in a report preparatory to a national program to conquer these illnesses, noted that 546,813 persons died of coronary artery disease in 1963. A surgical operation to combat this disease has been under development since 1946, when Dr. Arthur M. Vineberg of McGill University described a procedure for bringing arterial blood into the coronary arterial circuit. Under this procedure as presently used, the left internal mammary artery, which lies just behind the breastbone on the left side of the body, is implanted within the anterior wall of the muscle in



WIDE WORLD

NATIONAL INSTITUTES OF HEALTH

ARTIFICIAL HEART for use in humans is a goal of medical research. One type of experimental artificial heart (*l.*) was implanted in calves to study its performance. Heart shown above was implanted in dog at Baylor University.



UNIVERSITY OF KENTUCKY MEDICAL CENTER

WIDE WORLD

SURGEONS and medical team at Boston City Hospital (*right*) hooked up a pig's liver to a woman's circulatory system to try to save her life. She received five porcine liver perfusions and was kept alive for 18 days. Diagram (*above*) shows method used by U. of Kentucky Medical Center. Blood is pumped from artery in arm to an isolated pig's liver, passed through the liver to remove poisons, and then returned to the patient through a vein in the arm.

the left side of the heart. This is done by inserting the artery through a hole made in the wall of the heart. After the tip of the artery is fixed in place with a suture, the entire area is covered with a fat pad from the sac (pericardium) surrounding the heart.

The operation is performed on a patient who meets three conditions: (1) he is suffering from angina pectoris; (2) most of the damage to his coronary arteries is near the anterior wall of the left side of the heart; and (3) no nearby scar tissue from a prior heart attack is present.

Recently, Dr. Vineberg has reduced the mortality rate for this operation to 1.8%. Some 83% of the persons successfully operated on showed an improved condition, and 80% resumed their occupations.

In August 1965, Dr. Richard Warren and an associate, B.J. Brener, both of the Harvard Medical School, reviewed the information on patients treated by Vineberg's procedure. They concluded that the arterial channels remain open in nearly all cases. (See also HEART DISEASE.)

Stomach Surgery for Infants and Children. In 1965, Dr. Thomas C. Moore of the University of Kentucky Medical Center published a report on gastrectomy in infancy and childhood. Dr. Moore collected information from 17 countries on 113 patients who were less than 12 years old. Most of these patients had ulcers; others had stomach tumors, birth defects, infections, and stomach damage from ingesting acids and caustics. In three cases, the entire stomach was removed. Each of these patients was still alive 4½ to 9 years after the operation. The overall mortality rate for this group of 113 infants and children was 10%. Patients less than six years old accounted for most of the deaths.

The most significant finding of Dr. Moore's survey was that normal growth and development of the patient occurred consistently after removal of either the distal portion of the stomach or the entire stomach. When only the proximal portion of the stomach was removed, the patient's growth and development were highly retarded.

Liver Research. Although it is difficult to find ways to help support a failing or damaged liver in a patient with a reversible disease, efforts are worthwhile because this organ has a particularly remarkable natural regenerative ability that can be aided by giving it temporary support.

Laboratory scientists have made experimental studies of animal livers for many years. In recent decades, the heart-lung machine (pump-oxygenator) has been used to study animal livers, but there is a large gap between these animal experiments and actual operations on human beings. Another problem is that fresh, undiseased human liver is rarely available for immediate transfer to a patient.

In 1965, Dr. Ben Eisenman, Dr. D.S. Liem, and Dr. F. Raffucci of the University of Kentucky Medical School reported results of experiments with pig livers. They studied pig livers that were placed in a sterile chamber and were perfused with human blood to which an anticoagulant had been added to prevent clotting. The production and flow of bile from the liver was used as the best means for measuring liver function. Both blood and bile flow decreased 30% every five hours until both stopped. The reasons for this stoppage are unknown.

These studies showed the feasibility of using this technique on patients with failing livers. At least eight patients have been treated by using a pig liver as an auxiliary liver. All of these patients were comatose and were considered to be hopelessly ill. Their survival after treatment varied from 8 hours to 12 days. No patient was harmed by the treatment, and five awakened and were able to respond to commands. This improvement suggests that further trial of the treatment is warranted for desperately ill patients.

Skin Grafts for Burned Patients. There is only a minimal opportunity for the quick removal of burned, destroyed skin, and its replacement by means of skin grafts. Unremoved burned skin readily becomes infected. Therefore, many recent investigations of burns have been aimed at preventing and treating infections in burned skin. This work has been accompanied by efforts to cover the burned area as early as possible in order to permit the growth of normal skin.

In 1965, four surgeons at the Washington University School of Medicine in St. Louis found that a 0.5% silver nitrate solution is a safe antiseptic for use on burns. The burned areas of more than 25 patients were treated by applying thick cotton gauze dressings that were kept continuously wet with the silver nitrate solution. The dressings were changed once or twice daily. Septicemia (the invasion of the blood stream by bacteria) did not occur in any burn, no bacterial strains became immune to the silver nitrate, and there were no harmful effects on patients.

The use of the dressing over burned tissue does not prevent the death of burned tissue, and therefore skin grafting is still necessary. This is accomplished by placing thin strips of skin on the body, especially in flexure areas in order to prevent contracture. When the silver nitrate dressing is used, much less skin grafting is necessary than was previously required because of the marked regeneration of skin from nearby normal tissues. (See also BLINDNESS).

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SWEDEN

ASIA
EUROPE
AFRICA

While pursuing a policy of neutrality, Sweden continued to search for new avenues to world peace and disarmament. The most serious problems facing the Social Democrats, who remained in firm control of the government, were posed by the country's economy, which was increasingly subjected to inflationary pressures.

Foreign Policy. The annual debate in the Riksdag (parliament) on Sweden's foreign policy took place in the early part of the year. Most of the members pressed for further world disarmament negotiations. The four major parties expressed interest in the ultimate merger of Europe's two trade blocs, the Common Market and the European Free Trade Association. Sweden belongs to the latter.

National Defense. The question of whether Sweden's own military defenses should include a nuclear arsenal was debated in the Riksdag but not resolved. At the time of the debate, the Swedish Institute of Public Opinion Research announced that 69% of the persons it had polled felt Sweden should not obtain atomic weapons for its defense. This represented a substantial shift in public opinion; in a similar poll taken in 1957, only 36% opposed the acquisition of atomic arms.

Political Party Changes. Gunnar Heckscher resigned as chairman of the small Conservative party at the party congress in June. The choice of Yngve Holmberg to replace him came as a surprise since he was relatively young and had only recently entered politics. Another young politician made a swift rise in 1965: Olof Palme, the popular cabinet minister without portfolio, was appointed minister of communications in the fall.

Economy. Although Sweden continued to rank as the richest Scandinavian country, there were signs that the economy was "overheating," and the threat of a serious inflation caused general concern. The gross national product for 1964 had shown a 6.5% increase, a high percentage even for prosperous

KEYSTONE

SWEDISH ROYAL FAMILY, including Crown Prince Carl Gustaf (left), Princess Sibylla, and King Gustaf VI Adolf (center), applaud U.S. scientist Robert Burns Woodward, who was awarded the 1965 Nobel Prize in chemistry at Stockholm on Dec. 10, 1965.

SWEDEN · Information Highlights

Area: 173,665 square miles.
Population: 7,695,000 (Dec. 31, 1964 est.).
Chief Cities (1964 est.): Stockholm, the capital, 799,000; Göteborg, 414,633; Malmö, 241,860.
Government: *King*—Gustaf VI Adolf; *Premier*—Tage Erlander; *Parliament*—Riksdag: lower chamber (Andra Kammaren), 233 members: party seating (1965), Social Democrats, 113; Liberal, 42; Center, 35; Conservative, 32; Communist, 8; Citizen's Organization, 3; upper chamber (Första Kammaren), 151 members.
Religious Faiths: Evangelical Lutherans, 94% of population; others, 6%.
Education: *Literacy rate*—99% of population. *Total school enrollment* (1962)—1,289,058 (primary 841,000; secondary, 223,312; teacher-training, 4,100; vocational, 180,462; higher (1961), 40,184).
Finance (1965 est.): *Revenues,* $4,700,000,000; *expenditures,* $4,800,000,000; *public debt* (1964), $3,700,000,000; *monetary unit,* krona (5.17321 kronor equal U.S.$1).
Gross National Product (1964): $17,500,000,000.
Economic Indexes (1964): *Industrial production,* 138 (1958=100); *agricultural production,* 99 (1956–57=100); *cost of living,* 119 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 4,488,000; cement, 3,567,000; newsprint paper, 685,200; wheat flour, 373,200; meat, 360,000; gasoline (1962), 351,000; sugar, 296,000.
Crops (metric tons, 1964): Sugar beets, 1,857,000 (ranks 19th among world producers); barley, 1,365,000 (world rank, 12th); oats, 1,303,000 (world rank, 9th); rye, 115,000 (world rank, 20th); potatoes, 1,226,000; wheat, 953,000.
Minerals (metric tons, 1964): Iron ore, 26,535,000 (ranks 6th among world producers); zinc, 71,599 (world rank, 15th); lead, 65,200 (world rank, 11th); copper, 20,000 (world rank, 20th); uranium, 8 (world rank, 8th); silver, 3,060,751 troy ounces (world rank, 13th); gold, 124,000 troy ounces (world rank, 17th).
Foreign Trade (1964): *Exports,* $3,674,000,000 (chief exports: wood pulp, $439,000,000; paper, $371,000,000; wood, $278,000,000; iron ore, $210,000,000); *imports,* $3,855,000,000 (chief imports, 1963: nonelectrical machinery, $398,000,000; petroleum products, $348,500,000; transport equipment, $348,100,000). *Chief trading partners* (1963): West Germany (took 14% of exports, supplied 22% of imports); Britain (took 13% of exports, supplied 15% of imports); U.S. (took 6% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 59,869 miles (12,148 paved); *motor vehicles* (1964), 1,696,000 (automobiles, 1,556,000); *railways* (1963), 8,970 miles; *merchant vessels* (1964), 470 (3,969,000 gross registered tons); *airlines,* SAS, Linjeflyg; *principal airports,* Göteborg, Malmö, Stockholm.
Communications: *Telephones* (1964): 3,222,699; *television stations* (1964), 87; *television sets* (1964), 1,965,000; *radios* (1963), 2,950,000; *newspapers* (1963), 121 (daily circulation, 3,791,000).

Sweden. It was predicted that this rate would drop to about 4.5% in 1965, partly as a result of a shortage of labor and capital.

The head of the Labor Market Board predicted in 1965 that Sweden would need from 50,000 to 60,000 new workers annually for several years to supplement the regular labor force. It was hoped that Swedish women could be drawn into the labor force in greater numbers to fill some of the need for more workers.

Over the past four years, construction industries have expanded at an annual rate of 8% to 10%. The rate is expected to drop to 2% in 1965 as a result of an increase in the discount rate to 5.5% (the highest point since 1932) and a reduction in government investment in the industries. The discount rate was raised to check inflation and slow down the economy in order to prevent further strains on it.

On January 12, Minister of Finance Gunnar Sträng called for a 9% increase in the general sales tax to check the high level of consumption. Labor responded by demanding higher wages. Negotiations for a new two-year wage agreement between management and labor were begun in November. There is general concern that if labor costs go much higher, Sweden's exports will be priced out of the world market. Such a development would be extremely damaging to Sweden because the health of its economy depends on maintaining a high level of exports.

Education. In addition to the new university planned for Umeå, the committee on higher education proposed four new university centers: Stockholm University in Linköping; Uppsala, in Örebro; Göteborg, in Karlstad; and the University of Lund, in Växjo.

The committee also suggested the adoption of a new type of instruction, to replace in some instances the familiar lecture pattern with new methods, including instructional television. Increases in student housing facilities were also recommended.

Public debate on the advisability of sex education in the schools and in the public media continued, with no abatement in its intensity. The curriculum of the schools and the views of church leaders remained unchanged.

Deaths. Death took two members of the royal family in 1965. Queen Louise, wife of King Gustaf VI Adolf, died in March at the age of 75, and was given a state funeral. On June 5, Prince Wilhelm, brother of the king, died at the age of 80. (See NECROLOGY.)

RAYMOND E. LINDGREN
Professor and Dean of the College,
California State College, Long Beach

SWIMMING. See SPORTS.

SWITZERLAND

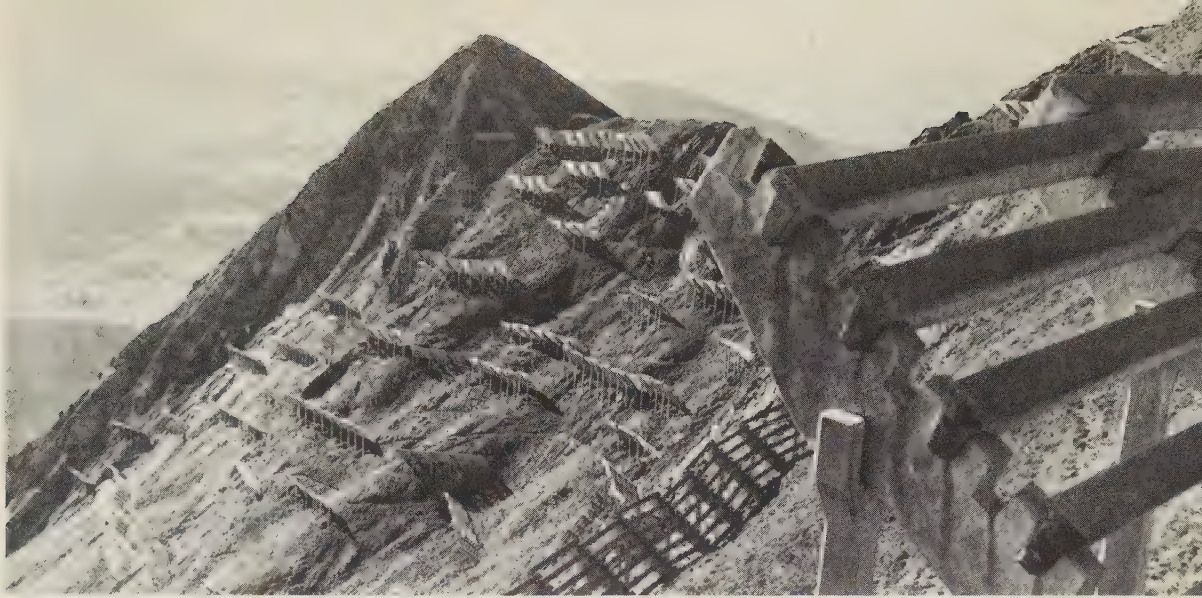
EUROPE
ASIA
AFRICA

Switzerland, in spite of its general prosperity, was faced with a number of problems in 1965, including inflation and the foreign-labor market.

Measures to Prevent Inflation. Two restrictive economic measures were approved by substantial majorities in a popular referendum held in February. The first, dealing with credit policy, was designed to reduce the inflow of foreign capital; the second was aimed at slowing the pace of the construction industry.

Foreign Labor. To meet the continuing need for unskilled labor, the federal government for some time has permitted the importation of workers from other European countries. In 1965 there were 475,000 Italian, 82,000 Spanish, and 79,000 German workers in Switzerland, a slight reduction in the total from the previous year.

The presence of so many foreign residents with different cultural backgrounds has produced social tensions as well as complaints about lower standards of quality. (For example, foreign labor has been blamed for the proverbially punctual Swiss trains sometimes falling behind schedule.) Consequently, there have been demands that the number of foreign workers be reduced. However, since their presence is an economic necessity, it is likely that they will remain for the immediate future. The government has made some concessions to the foreign workers, and their living conditions have improved. Present government policy is to stabilize their numbers, and discussions continue as to the best method to allocate them to various sectors of



KEYSTONE

AVALANCHES IN SWITZERLAND are so destructive that barriers, such as those in the St. Antönien Valley, are erected to prevent debris from hurtling down the slopes.

the national economy where they are most needed.

Minority Unrest. In 1959 the French-speaking Catholic minority in the Jura Mountains protested against the German-speaking Protestant administration of Canton Berne. The minority problem continued to make news in 1965, although it appeared to be less acute than before. After forming the Free Jura party, some of the dissatisfied group asked a statesman from a neighboring country to intercede in their behalf—a step that the average Swiss resented. Following disturbances at the Lausanne exposition in 1964, local and federal government authorities made some efforts to conciliate the Jurassiens. However, it is unlikely that sufficient support could be obtained to approve the constitutional amendment required for the creation of a separate Jura canton.

SWITZERLAND · Information Highlights

Area: 15,941 square miles.
Population: 5,825,000 (Dec. 31, 1964, est.).
Chief Cities (1964 est.): Berne, the capital, 167,400; Zürich, 440,000; Basel, 211,500; Geneva, 174,700.
Government: *President*—Hans-Pieter Tschudi (took office Jan. 1, 1965). *Parliament*—National Council (Nationalrat), 200 members; party seating (1965)—53 Social Democrats, 51 Radical Democrats, 48 Catholic Conservatives, 22 Peasants, 26 others. Council of States (Ständerat), 44 members.
Religious Faiths: Protestants, 58% of population; Roman Catholics, 40%.
Education: *Literacy rate*—99% of population. *Total school enrollment* (1961–62)—882,576 (primary 577,055; secondary, 142,807; technical 132,614; higher, 30,100).
Finance (1965 est.): *Revenues,* $1,113,000,000; *expenditures,* $1,110,000,000; *consolidated debt* (1964), $1,232,000,000; *monetary unit,* Swiss franc (4.373 francs equal U.S.$1).
Gross National Product (1964): $12,700,000,000.
National Income (1964): $10,700,000,000; average annual income per person, $1,760.
Economic Indexes (1964): *Agricultural production,* 107 (1956–57 = 100); *cost of living,* 114 (1958 = 100).
Manufacturing (metric tons, 1964): Cement, 4,322,000; wheat flour (1963), 362,000; crude steel, 345,000; meat (1963), 255,000; wine, 91,000; cheese, 69,600; aluminum, 64,233.
Crops (metric tons, 1964): Potatoes (1963), 1,246,000; wheat, 389,000; sugar beets, 362,000; grapes, 150,000; barley, 103,000; rye, 67,000; oats, 32,000.
Minerals (metric tons, 1964): Lime, 200,000; salt, 182,000; iron ore, 90,000.
Foreign Trade (1964): *Exports,* $2,647,000,000 (chief exports, 1963: watches, clocks, and parts, $342,800,000; textile yarn and fabrics, $204,600,000; medicinal and pharmaceutical products, $148,600,000; textile machinery, $143,100,000); *imports,* $3,610,000,000 (chief imports, 1963: nonelectrical machinery, $374,600,000; iron and steel, $210,500,000; petroleum products, $201,700,000). *Chief trading partners* (1963): West Germany (took 17% of exports, supplied 32% of imports); France (took 9% of exports, supplied 14% of imports); Italy (took 10% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 31,300 miles (12,300 paved); *motor vehicles* (1964), 930,000 (automobiles, 835,000); *railways* (1963), 3,148 miles; *merchant vessels* (1964), 26 (194,000 gross registered tons); *airline* (1965), Swissair; *principal airports,* Basel, Geneva, Zürich.
Communications: *Telephones* (1964): 1,997,957; *television stations* (1964), 18; *television sets* (1964), 500,000; *radios* (1963), 1,583,000; *newspapers* (1963), 137 (daily circulation, 2,122,000).

Banking Scandal. Early in 1965 it was disclosed that two banks, the Spar- und Kreditbank of St. Gallen and the Banque Genèvoise de Commerce et de Crédit, were involved in doubtful business practices after they came under the control of a Spanish financier. The scandal reached the Swiss Banking Commission, whose chairman, Max Hommel, was suspended and replaced by a former federal president, Hans Streuli. Both banks subsequently took corrective managerial measures.

Avalanche. In August, at Saas-Fee in southern Switzerland, near the Italian border, millions of tons of ice broke loose from a glacier and caused an avalanche that killed at least 88 Swiss and Italian workers. The avalanche delayed construction of the Mattmark hydroelectric dam.

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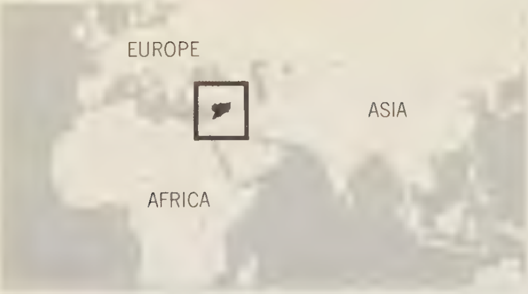
SEARCH FOR VICTIMS at Saas-Fee, Switzerland, followed avalanche on August 30 that took at least 11 lives.

PIX

SYRIA



SYRIA · Information Highlights

Area: 71,227 square miles.
Population: 5,399,000 (July 1, 1964 est.).
Chief Cities (1963 est.): Damascus, the capital, 544,712; Aleppo, 528,618; Homs, 175,303; Hama, 126,364.
Government: *President*—Maj. Gen. Amin el-Hafez (appointed 1964); *Premier*—Youssef Zayyen (appointed Sept. 23, 1965). *Parliament*—National Council, 95 members.
Religious Faiths: Muslims, 82% of population; Christians, 12%.
Education: *Literacy rate* (1960)—35% of population aged 10 and over. *Total school enrollment* (1962)—712,477 (primary, 563,152; secondary, 110,630; teacher-training, 3,248; technical, 10,011; higher, 25,436).
Finance (1963 est.): *Revenues*, $247,000,000; *expenditures*, $247,000,000; *monetary unit*, Syrian pound (3.82 pounds equal U.S.$1).
Net Domestic Product (1964): $923,000,000.
Economic Indexes: *Industrial production* (1962), 133 (1958=100); *agricultural production* (1964), 142 (1956–57=100); *cost of living* (1962), 105 (1958=100).
Manufacturing (metric tons, 1963): Cement, 685,000; gasoline, 127,000; meat (mutton and lamb, 1961), 22,000; olive oil (1964), 21,000; cotton yarn, 15,900; sugar, 10,000; beer, 26,200 hectoliters.
Crops (metric tons, 1964): Cottonseed, 287,000 (ranks 10th among world producers); wheat, 1,277,000; barley, 637,000; grapes, 201,000; olives, 123,000; lentils, 90,000; figs (1963), 44,100; chickpeas, 29,000; wool (1963), 9,400.
Mineral: Salt (1964), 20,000 metric tons.
Foreign Trade (1964): *Exports*, $176,100,000 (chief exports: cotton, $88,700,000; wheat, $12,300,000; barley, $92,400,000; wool, $88,000,000); *imports*, $235,200,000 (chief imports, 1963: iron and steel, $16,600,000; crude petroleum, $12,700,000; chemicals and pharmaceuticals, $12,400,000). *Chief trading partners* (1963): Lebanon (took 15% of exports, supplied 5% of imports); West Germany (took 2% of exports, supplied 13% of imports); France (took 9% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 5,237 miles (3,200 paved); *motor vehicles* (1964), 44,884 (automobiles, 28,657); *railways* (1963), 489 miles; *principal airports*, Aleppo, Damascus.
Communications: *Telephones* (1964): 67,718; *television stations* (1964), 5; *television sets* (1964), 65,000; *radios* (1959), 260,000; *newspapers* (1962), 25.

The Syrian economy was extensively nationalized during the early months of 1965 as the ruling Baath party pushed forward its Socialist program. In August-September and again in late December the provisional government was reorganized to give wider representation to the various economic and social elements of the population, but firm control by the Baath party and the dominant position of Gen. Amin el-Hafez in the party and the state were maintained. Tension over the Palestine issue remained high as Syria adopted the most active anti-Israeli policy of any Arab country.

Nationalization Program. By a series of decrees issued between Dec. 23, 1964, and May 3, 1965, the government wholly or partially nationalized the major manufacturing and processing plants, privately owned public utilities, domestic and foreign oil companies, and many export-import firms. Owners were compensated in government bonds redeemable over a 15-year period and paying 3% interest.

Efforts of the business community and conservative religious leaders to arouse the public against the initial nationalization measures resulted in rioting in Damascus on January 23 and 24. Stringent measures of repression restored order, and by January 29 overt opposition had been crushed.

Economic Development. In spite of the confusion caused by hurried efforts to organize a centrally planned economy made up of a fully nationalized sector, a mixed sector, and a private enterprise sector, the government moved ahead with a long-range development plan. The development budget for 1965 called for expenditures of $105,644,000.

Several agreements providing for development by foreign companies were concluded during 1965. On March 31 a contract was signed with a group of French companies for the construction of a new $25 million jet airport near Damascus. Late in May agreement was reached with a British consortium for the construction of a 400-mile oil pipeline from the as yet unexploited oilfields at Karachuk in northeast Syria to the new port of Tartus on the Mediterranean Sea.

Political Developments. The disturbances caused by the implementation of the nationalization program and political factionalism within the Baath party delayed promised constitutional changes, but on August 23 an enlarged National Revolutionary Council of 95 members was established. It included members of the Council of the Revolutionary Command, which had seized power in 1963; the Syrian members of the international directorate of the Baath party; the directorate of the Syrian Baath party; and representatives of peasant, trade union, and professional organizations.

On September 2 the National Council elected a new five-member Presidency Council, with General Hafez again serving as chairman. Hafez relinquished the premiership, which he had held since October 1964, and on September 23 a new Baathist cabinet was installed under the leadership of Dr. Youssef Zayyen. On December 21, following rumors of an abortive coup against President Hafez by young Baathist army officers with close ties to the Zayyen government, the international directorate of the Baath party forced the resignation of the cabinet. Salah el-Bitar, a moderate Baath leader who had served as premier in 1964, was asked to form a government, and on Jan. 2, 1966, he announced the formation of a predominantly civilian cabinet.

Foreign Affairs. Friction with Israel, which had resulted in serious border clashes late in 1964, continued throughout 1965. The usual frontier disputes were compounded by activities of the Palestine-Arab refugee organization, Al Fatah, which made some of its raids into Israel from Syria, and by construction on the initial stages of Syrian diversionary works to carry the waters of the Baniyas River away from the Jordan River in order to prevent their use by Israel. Israeli and Syrian border forces clashed on February 17 and 18, between March 2 and 21, and on May 13, July 18, August 12, and December 2.

As the only Baath-controlled Arab state, Syria remained somewhat isolated within the Arab League, although it cooperated in the work of the organization and on January 1 became a charter member of the Arab Common Market.

Syria maintained its role of nonalignment between the Communist states and the West. Early in the year relations with the United States became somewhat strained when, on February 16, the Damascus government expelled Walter S. Snowdon, second secretary in the American embassy, for alleged involvement in the activities of a Syrian spy ring.

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TAIWAN. See CHINA.

TANZANIA

The United Republic of Tanzania, founded in 1964 by the merger of the independent states of Tanganyika and Zanzibar, sought in 1965 to unite its people by appeals to a nationalism that would transcend their loyalties to the former countries. President Julius K. Nyerere seemed determined to sacrifice inherited political and economic institutions in order to build a genuinely African society. His nationalistic program received a strong mandate on September 21, when 96.5% of the voters confirmed his nomination to a second five-year term. To forge national unity, a new interim constitution establishing a one-party state was adopted in July.

Tanzania in effect withdrew from East African monetary institutions by providing for a national bank and currency and for higher protective tariffs in its budget for fiscal year 1966. Although frustrating plans for an East African political federation, Nyerere remained firmly committed to African unity. When the Organization of African Unity (OAU) resolved to break relations with Britain on December 15 if Britain failed to crush Rhodesia's white supremacist government, Tanzania complied with the resolution at the risk of losing some $10,000,000 in annual aid from Britain.

Government. In March, President Nyerere announced that the Tanganyika African National Union (TANU) would merge with the Afro-Shirazi Party (ASP) of Zanzibar, and on May 11 the Zanzibar Revolutionary Council voted to abolish all parties on the island but the ASP. In a special June meeting, TANU decided that a joint TANU-ASP conference would select one candidate for the fall presidential election. On July 5 the National Assembly approved the Interim Constitution of Tanzania, which set up a one-party state, and the Presidential Elections Bill, which provided for the nomination of a single presidential candidate.

Elections for the 107 members of the National Assembly from mainland Tanganyika were held on September 21. Although TANU was the only political party represented, it put up two or more candidates each for 101 of the constituencies, and competition was lively. On the same day, Nyerere was reelected unopposed in a presidential plebiscite. A week later he reshuffled his cabinet, taking the key post of minister of external affairs for himself and moving the incumbent, Oscar Kambona, to the new post of minister of regional administration.

UPI

TANZANIAN STUDENTS RIOT in Dar es Salaam on November 13 to protest British handling of the Rhodesian crisis.

Foreign Affairs. Relations with the United States worsened in 1965 as an aftermath of Tanzania's accusations in November 1964 that the Americans were conspiring with the Portuguese to attack Tanzania. In January, two U.S. diplomatic officials were expelled for alleged subversive activities. The United States retaliated by requesting the recall of Tanzanian diplomats in Washington, and later both nations temporarily recalled their ambassadors.

Meanwhile, the growing friendship between Communist China and Tanzania was climaxed by an exchange of state visits. President Nyerere visited China in February, and Prime Minister Chou En-lai came to Tanzania in June. After Chou's visit, President Nyerere defended Tanzania's expanding links with China, but sought to improve relations with the United States. Affirming his policy of nonalignment, he said, "Try to understand that by ex-

TANZANIA · Information Highlights

ASIA
AFRICA
S. AMERICA

Area: 362,820 square miles.
Population: 10,325,000 (mid-1964 est.).
Capital: Dar es Salaam 150,000 (1964 est.).
Government: *President*—Julius K. Nyerere; *first vice president*—Abeid Amani Karume. *Parliament*—National Assembly; 204 members (when fully constituted).
Religious Faiths: Tribal religions, 55% of population; Christians, 22%; Muslims, 22%, others, 1%.
Gross National Product (1964): $718,000,000.
Education: *Total school enrollment* (1961)—573,949 (primary, 545,958; secondary, 18,201; teacher-training, 1,853; technical, 7,923; higher, 14).
Finance (1965 est.): *Revenues,* $95,000,000; *expenditures,* $157,000,000; *monetary unit,* East African shilling (7.143 shillings equal U.S.$1).
National Income (1964): $638,000,000; average annual income per person, $62.
Manufacturing (metric tons, 1963): Sugar (1964), 82,000; meat (1959), 32,000; wheat flour, 19,000; tobacco, 6.
Crops (metric tons, 1964–65 crop year): Sisal (1963), 242,000 (ranks 1st among producers); tea, 4,800 (rank, 16th); rice (1963–64), 128,000; cottonseed, 100,000; coffee, 32,100.
Minerals (metric tons, 1964): Gold, 93,040 troy ounces (ranks 20th among world producers); salt, 33,000; gem diamonds, 12,000 carats; silver (exports) 25,329 troy ounces.
Foreign Trade (1964): *Exports,* $197,000,000 (chief exports: sisal, $61,300,000; coffee, $30,800,000; cotton, $27,700,000; diamonds, $19,000,000); *imports,* $123,000,000 (chief imports, 1963: cotton fabrics, $11,700,000; petroleum products, $10,500,000). *Chief trading partners* (Tanganyika only, 1963): Britain (took 32% of exports, supplied 36% of imports); Japan (3% of exports, 13% of imports).
Transportation: *Roads* (1964), 21,034 miles (895 paved); *motor vehicles* (1964), 50,707; *airline,* East African Airways; *principal airport,* Dar es Salaam.
Communications: *Telephones* (1964), 20,768; *radios* (1963), 36,000; *newspapers* (1962), 7 (daily circulation, 45,000).

UPI

PRESIDENT NYERERE (right) toasts Premier Chou En-lai of China at a state banquet in Dar es Salaam on June 5.

JULIUS K. NYERERE, president of Tanzania, once regarded as a friend of the West, was less than friendly toward Western policies in 1965. He concluded trade pacts with Communist China, broke relations with Britain, and transformed his nation into a one-party state. However, after his reelection on September 21, he restated his adherence to nonalignment: "We stand ready to remain friends with all nations on the basis of equality and mutual respect."

Nyerere was born in Tanganyika about 1921. The first Tanganyikan to study at a British university, he took an M.A. degree at Edinburgh in 1952. Returning home, he founded the Tanganyika African National Union, the country's only political party, in 1954. He became prime minister in 1961, but resigned shortly after the nation won independence from Britain on Dec. 9, 1961. When Tanganyika became a republic on Dec. 9, 1962, Nyerere was elected president. In 1964 he negotiated the union of Tanganyika and Zanzibar (Tanzania), and assumed the presidency.

tending a hand of friendship to the Chinese I don't intend to be an enemy of the Americans."

The trade and aid agreements with China also dealt a blow to the East African Common Services Organization and to relations between Tanzania and neighboring Kenya and Uganda. Since China would be supplying many of the consumer goods Tanzania imports from its neighbors, it was an opportune time for Tanzania to declare its financial independence in the budget announced on June 10.

On December 15, Tanzania, in compliance with the OAU resolution, became the first member of the Commonwealth of Nations to break relations with Britain. However, it was expected that British aid would continue.

West Germany withdrew its military aid in February, after President Nyerere agreed to allow an East German consulate in Dar es Salaam.

Economy. With foreign assistance, the Tanzanian economy continued to expand under its five-year plan (1964–69). Large development loans were made by Communist China, Britain, West Germany, the Netherlands, and Israel.

In Zanzibar, officials continued to nationalize factories, confiscate private plantations, and control processing plants for the island's exports. On June 28 a land redistribution program was begun to apportion confiscated land in three-acre plots to some 900 persons.

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TARIFFS. See INTERNATIONAL TRADE.

TAXATION

In spite of lower federal income tax rates approved by Congress in 1964, and the termination or reduction of certain excise taxes in 1965, tax receipts continued to rise in 1965.

Excise Taxes. The Excise Tax Reduction Act of 1965 (Public Law 89–44), signed by President Johnson on June 21, terminated or reduced many excise taxes. Retail excise taxes on jewelry, furs, toilet preparations, and luggage were repealed as of June 22. Certain manufacturers' excise taxes also were repealed. These included taxes on household refrigerators; self-contained air conditioners; electric, gas, and oil household appliances; television and radio sets; musical instruments; most sporting goods; photographic equipment; and business machines.

On June 22 the manufacturers' excise tax on passenger automobiles was cut from 10% to 7%, and on Jan. 1, 1966, to 6%. Furthermore, it was scheduled to be cut to 4% on Jan. 1, 1967, to 2% on Jan. 1, 1968, and to 1% on Jan. 1, 1969. The tax on most trucks, buses, tractors, and trailers remained at 10%.

The taxes on admission to theaters, sporting events, musical performances, and cabarets were repealed as of noon on Dec. 31, 1965. The 10% federal excise tax on local and long distance telephone service will drop to 3% in 1966, 2% in 1967, and 1% in 1968, and will end in 1969.

Other Tax Measures. Public Law 89-243 (Oct. 9, 1965) extended the Interest Equalization Tax until July 31, 1967, with a few modifications. This law seeks to improve the balance of payments position of the United States by discouraging investments in foreign securities.

President Johnson's Executive Order No. 11,216 (April 24, 1965) designated Vietnam as a combat zone, beginning Jan. 1, 1964. This entitles enlisted men to exclude from taxable income all compensation received for service in that area from that date, or during hospitalization resulting from such service. Estates of eligible servicemen are also entitled to a special estate tax exemption.

(For changes in the income tax law to implement Public Law 89-97—the Social Security Amendments Act of July 30, 1965, popularly known as the Medicare law—see MEDICARE; SOCIAL SECURITY.)

Court Decisions. Court rulings in 1965 in the field of taxation were relatively unspectacular. The Supreme Court held that accidental death insurance, such as airplane flight insurance, is equivalent to straight life insurance for estate tax purposes. A lower federal court ruled that although a state court refuses to recognize the validity of Mexican and Florida divorces as applied to its own residents, these divorces are valid where federal income taxes are concerned.

Treasury Rulings. The discount given by insurance companies to persons who prepay their life insurance premiums for a number of years is no longer tax-free to the policy owners. The discount will be prorated over the years covered by the prepayment, and the policyholder will add to his taxable income the portion of discount allocated for a particular year.

Various Internal Revenue offices announced that, as a rule of thumb, taxpayers who are unable to provide proof of the exact amounts of their charitable contributions but can satisfy the agent that contributions have in fact been made are allowed deductions ranging between $50 and $80.

A liberalization of the "reserve ratio" limitation on Treasury Guideline Depreciation saved businessmen some $700 million in taxes.

Many states passed laws permitting members of various professions to carry on their practice in special corporate form in order to enable them to qualify for important federal tax benefits ordinarily available only to employees of corporations. The Treasury nullified the effect of this legislation by refusing to recognize these corporations as true corporations for federal tax purposes.

The method of valuing property for gift and estate taxes was changed to include a "retail" valuation method which will generally increase taxable values for both taxes. Savings and Loan Associations were told to classify their dividends to depositors as interest when reporting the annual amounts paid or credited to depositors.

Revenue Collections. Despite the individual and corporate rate cuts made by the Revenue Act of 1964, federal internal revenue collections for fiscal year 1965 reached a new record of $114,429,000,000. This compares with $112,260,000,000 collected for fiscal 1964, during which higher income tax rates were in effect.

State tax collections rose to a new peak of $26,104,000,000 for fiscal year 1965, compared with $24,243,000,000 collected in fiscal year 1964. Although corporation net income taxes produced the greatest percentage increase among the various state taxes—13.9%—general sales taxes continued to provide 25% of the total taxes collected.

The average per capita state tax increased from $127.25 for fiscal year 1964 to $135.24 for fiscal year 1965. Delaware had the highest—$239.50—followed by Hawaii, with $217.73. Nebraska had the lowest—$78.01, and New Jersey was next lowest, with $80.24.

Local government tax collections for fiscal year 1964 soared to a record high of $23,542,000,000. Property taxes produced $20,519,000,000, and sales and gross receipts taxes, $1,806,000,000.

STATE TAX COLLECTIONS, BY TYPE OF TAX
(Fiscal years; amounts in millions)[1]

Tax source	1965 (prelim.)	1964	1963
Total collections	$26,104	$24,243	$22,117
General sales or gross receipts	6,710	6,084	5,539
Motor fuels	4,295	4,059	3,851
Alcoholic beverages	917	864	793
Tobacco products	1,284	1,196	1,124
Insurance	743	708	639
Public utilities	498	498	437
Motor vehicles licenses	1,868	1,783	1,642
Motor vehicles operators	151	134	137
Corporations licenses	529	518	482
Alcoholic beverages licenses	133	125	90
Individual income[2]	3,642	3,415	2,956
Corporation net income[2]	1,931	1,695	1,505
Property	765	722	688
Death and gift	731	658	595
Severance	503	489	468
Other	1,403	1,296	1,170

[1] Because of rounding, detail does not always add to total. [2] Individual income tax figures include corporation net income tax amounts for New Mexico in each fiscal year shown. (Source: U.S. Department of Commerce.)

Tax Developments in Other Countries. Argentina increased its withholding taxes on interest and dividends paid to foreigners and raised the profits tax on Argentine branches of foreign companies from 46.03% to 61.07%.

Canada cut its personal income taxes by 10% and extended to the end of 1966 the fast write-offs of amounts expended on new machinery and equipment.

Colombia imposed a surcharge of 15% on total income tax payments for 1964, payable in 1965, and a surcharge of 10% on total income tax payments for 1965, payable in 1966.

El Salvador repealed its 50% consumption tax on cosmetic and toilet articles.

Great Britain raised its basic income tax rate from 38.75% to 41.25%; boosted taxes on liquor, cigarettes, and automobile licenses; and barred any business entertainment deductions except for entertaining overseas buyers. It also imposed a tax on capital gains for the first time, with a 41.25% rate on gains realized within a year after the acquisition of an asset, and a 30% rate if the asset is held longer than a year.

Indonesia adjusted business tax rates so that businesses earning less than 2.5 million rupees pay only a 10% tax, and businesses earning more than 500 million rupees pay the top rate of 52.5%. It also modified its personal income tax schedule to exempt many more individuals entirely and to lower the top rate from 75% to 40%.

Italy reduced registration, government concession, and mortgage taxes on business mergers occurring between March 28, 1965, and Dec. 31, 1967.

Jordan enacted a new income tax law to achieve a more progressive rate and bracket structure. The maximum rate on incomes over $22,400 is 50%, corporate profits are taxed at a flat rate of 25%, and dividends to stockholders are not taxable.

Malaysia imposed a turnover tax rate of 0.5% on businesses with turnovers in excess of $12,000 a year. It also levied a 10% income tax on tin mining earnings in addition to the standard income tax.

Nationalist China imposed new commodity taxes on refrigerators and air conditioners at a 15% rate, and on television sets at a 10% rate.

Norway raised its general turnover tax rate from 10% to 12%.

Panama adopted a new income tax schedule ranging from 5% to 45%. Under this schedule, individuals in lower income brackets pay less tax than before while those in medium and higher brackets pay more. It also abolished the previous capital gains tax exemption on real property held for more than two years.

Paraguay imposed an annual tax of 0.5% on the capital and accumulated reserves of corporations and certain other firms, including branches of foreign firms. The law expires at the end of 1968.

Peru raised general income tax rates and the tax rate on mining profits. It also boosted the sales tax rate from 4.5% to 5%.

Sweden increased the general turnover tax rate from 6.4% to 10% and abolished specific taxes on sugar, phonograph records, playing cards, and toothpaste.

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TEA

World production of tea continued upward in 1965. Plantations on three continents yielded 2,416,200,000 pounds, an increase of 20,900,000 pounds over the record 1964 harvest.

Continuation of the upward trend is attributed to expanding acreage, increased use of fertilizers, and the replanting of existing estates with higher-yielding bushes. Thus far, rising consumption has been able to absorb the increasing production.

Asia grew 92% of the world's tea in 1965, with production estimated at 2,236,000,000 pounds. Africa followed with 135,200,000 pounds, and South America with 45,000,000 pounds.

Chief Producers. India continued to be the world's largest producer; its output of 825,000,000 pounds was slightly above the 1964 record. Ceylon retained its No. 2 position, with a record crop of 490,000,000 pounds—about 8,200,000 pounds more than in 1964. Communist China produced about the same amount of tea—350,000,000 pounds—as in 1964. Japan's production rose slightly, to 185,000,000 pounds. The Soviet Union's crop of 100,000,000 pounds was about the same as in 1964.

TEA PRODUCTION IN PRINCIPAL COUNTRIES

(In pounds)

Country	Average, 1955–59	1964	Forecast, 1965
India	695,900,000	823,800,000	825,000,000
Ceylon	395,900,000	481,800,000	490,000,000
China, Communist	279,800,000	350,000,000	350,000,000
Japan	163,200,000	183,600,000	185,000,000
USSR	63,700,000	100,000,000	100,000,000
Indonesia	100,200,000	100,000,000	100,000,000
Pakistan	53,500,000	63,200,000	70,000,000
Taiwan	33,200,000	40,300,000	42,000,000
Kenya	23,100,000	44,600,000	45,000,000
Argentina	5,200,000	27,500,000	27,000,000
Malawi	20,700,000	27,300,000	26,000,000
Mozambique	15,200,000	22,200,000	22,000,000
World total	1,908,900,000	2,395,300,000	2,416,200,000

South America continued its rapid increase in tea production. Brazil produced about 15,000,000 pounds, or nearly five times the 1955–59 average.

U.S. consumption of tea per person in 1965 was estimated at 0.70 pounds, up from the 0.69 pounds consumed in 1964 and the 1957–59 average of 0.60 pounds.

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TELEPHONE

By the end of 1965 there were 93.6 million telephones in the United States—an increase of almost 5 million during the year. Of these, almost 76 million were operated by the Bell System. Use of telephones also increased with some 92.3 billion local and long-distance calls carried over Bell System facilities, compared with 86.8 billion in 1964.

At the end of 1965, more than 87% of Bell System customers could dial long-distance calls directly, and almost 4 million phones had expanded direct long-distance dialing for person-to-person, collect, and credit card services. This service became possible when new cordless switching consoles were installed as part of the record $3.9 billion construction program for 1965.

New Cables. Work started on the installation of a second blast-resistant underground cable which will add 18,740 voice-grade channels between Massachusetts and Chicago when it is completed in 1966. Work also began on a new coaxial cable between Miami and Boston. Both of these hardened cable routes—with all amplifier stations and manned communications centers underground—are built to withstand natural disasters and other crises, including peripheral nuclear blasts.

The fourth transatlantic cable went into full operation between New Jersey and France in 1965. This cable, which is almost 3,600 nautical miles in length, adds 128 voice-grade circuits to existing channels.

Communications Satellite. Commercial telephone service via the Early Bird communications satellite was inaugurated between the United States and 12 European countries on June 28. International communications companies use the satellite to transmit phone calls, television and radio programs, data, and photographs. By year-end, U.S. telephones were connected with phones in 188 foreign countries.

Electronic Switching. The first electronic central office went into regular commercial service on May 30 at Succasunna, N.J. The operation inaugurated a $12 billion, 35-year program of changing the entire Bell System's switching equipment from electromechanical to electronic operation. Electronic switching permits new services. In Succasunna these included: dialing only one to four digits to make both local and distance calls; transferring calls from one's own phone to that in another home or office; interconnecting three or four telephones for conference calls; and dialing a code to transfer incoming calls to a particular phone. Similar services were introduced in electromechanical offices in Sioux City (Iowa) and Wellesley (Mass.).

Mobile Telephones. Dial Mobile Service, introduced in 1965, provides improved transmission and other features to make mobile phones part of the nationwide dial network. Transistorized units give automatic channel selection and eliminate push-to-talk operation. There are mobile phones in 100 areas.

TELEPHONES BY MAJOR COUNTRIES

Country	Telephones Jan. 1, 1965	No. per 100 population	% increase over 1964
Argentina	1,472,132	6.64	3.3
Australia	2,670,212	23.98	5.9
Belgium	1,468,144	15.57	7.1
Brazil	1,263,072	1.60	3.8
Canada	7,021,000	36.12	5.5
Czechoslovakia	1,398,509	9.91	7.7
Denmark	1,310,746	27.46	5.0
France	5,703,878	11.71	6.9
Germany, East	1,586,838	9.33	4.7
Germany, West	8,168,188	13.93	7.5
Great Britain	9,960,000	18.27	6.6
Italy	5,528,751	10.54	9.3
Japan	12,250,841	12.54	14.7
Netherlands	2,180,273	17.85	7.8
Poland	1,193,362	3.81	9.6
South Africa	1,133,331	6.40	6.0
Spain	2,526,843	8.03	10.7
Sweden	3,386,925	44.01	5.1
Switzerland	2,131,521	35.97	6.7
USSR (est.)	7,200,000	3.14	10.7
United States	88,785,000	45.88	5.1

Source: *The World's Telephones 1965*, American Telephone and Telegraph Company.

Pushbutton Telephones. Touch-tone phones, being introduced gradually, are available in more than 40 states. These phones, with pushbuttons instead of dials, give greater ease and speed of calling. In addition, they are used as data-input devices. Several banks began using touch-tone phones to make credit and debit entries and to check on account balances. Small businesses began using them to send data to central billing services.

Introduced in 1965, the Trimline phone, with the dial in the handset, was offered in six states.

Excise Tax. Congress voted to reduce the federal excise tax on telephone service from 10% to 3%, effective Jan. 1, 1966, and to phase out the tax by 1969; however, President Johnson asked Congress on Jan. 12, 1966, to restore the 10% tax.

Interstate long-distance rates were reduced for evening and night calls on Feb. 1, 1965, and for station-to-station day calls after April 1.

NADINE GOLLADAY SIMMONS
Public Information Supervisor
American Telephone and Telegraph Co.

TELEVISION AND RADIO

CBS

INTERNATIONAL TELEVISION COMMUNICATION began on commercial basis in 1965 with launching of "Early Bird" satellite. In control room (*above*) director chooses program from panel of monitors.

TELEVISION AND RADIO

Television's programming and technical developments in 1965 were both dominated by the advances made in color television. But there were few surprises among the new programs, and surprisingly little use was made of the new communications satellite in its first year of commercial operation. This article reviews the major developments of 1965 in two sections: (1) Television and Radio Programs; (2) Television and Radio Engineering.

TELEVISION AND RADIO PROGRAMS

The face of the television tube underwent a remarkable change from black and white to color in 1965. The major development in the industry was that color programs were presented at all times of the day and night. Of nearly equal importance, however, was the fact that, in 1965, television was at its most rewarding when it covered major news events as they happened.

Color. At the end of the normal broadcasting season, in May 1965, NBC-TV and its parent company, RCA, were still mounting a lonely struggle to persuade the American consumer to buy enough color sets to make color broadcasting economically feasible. By summer it was clear that the rush to color was on. During the entire year 1964, manufacturers sold only 1,366,301 color TV sets to distributors; but in the first nine months of 1965, they sold 1,783,952 sets. Color TV sets in these nine months represented 24% of all TV set sales.

In response, the networks greatly increased their color broadcasts. By the fall between 40% and 50% of the nightime programs on CBS and ABC were in color. On NBC the black and white program was the exception. The NBC peacock spread its colorful tail at 7:30 A.M,, and thereafter presided over all but a few programs. The exceptions were chiefly news programs and an occasional black and white motion picture. NBC announced in August that by the end of the year most of its news programs would also be in color. The majority of the new fall entertainment programs were in color.

News Coverage. Operating with the skills learned from their superb coverage of the 1964 presidential election, the television networks added luster to their image in 1965 with their coverage of the Gemini space flights, and of Pope Paul VI's visit to the United States. For the Gemini flights, the networks set up teams at the Manned Spacecraft Center in Houston (Texas), at Cape Kennedy (Fla.), and in their own so-called space centers. Using the best of their talent, they covered the launchings and recoveries in minute detail. Fred Friendly, the president of CBS News, thought the coverage of the Gemini 5 flight (August 21–29) was too detailed and too long. In an open letter to his counterpart at NBC, William McAndrew, he stated this view. McAndrew disagreed, but when the time came for the launching of Gemini 7 (December 4), both networks gave it somewhat less, although still extensive, coverage. NBC employed a split-screen technique to cover both the countdown and its regularly scheduled program (a football game).

Pope Paul's visit to New York and the United Nations on October 4 was covered in great detail, from his airport arrival to his departure, and including his visit to St. Patrick's Cathedral, his meeting with President Johnson, his address to the United Nations, his papal Mass at Yankee Stadium, and his brief visit to the Vatican pavilion at the New York World's Fair.

Other important events of the year—all well covered by the network news departments—included the Ranger spacecraft moon photos, especially those

CBS

NATIONAL DRIVER'S TEST, first seen in May, gave viewers a chance to measure driving skill and knowledge.

CBS

NATIONAL CITIZENSHIP TEST used dramatic scenes to illustrate test questions on citizen's knowledge of rights.

taken by Ranger 9 on March 24 and televised as they were taken; the close-up pictures of Mars transmitted by Mariner 4, which were seen on the home screen late in July; the inauguration of President Johnson (January 20); and the funeral of Sir Winston Churchill (January 30).

A platitude of the television industry that news programming doesn't pay was contradicted by NBC's *Today* show and its *Huntley-Brinkley Report*. They were among the network's top moneymakers. It is expected that the *Huntley-Brinkley Report* will soon be earning as much as $28 million annually for the network.

Two other news programs are worthy of special note: NBC's 3½-hour *American White Paper: United States Foreign Policy,* and CBS' *The National Driver's Test.* Although *American White Paper* was criticized for being too long and too uncritical, it served to give its audience a thorough survey of U.S. foreign policy in the past 20 years, and represented a courageous step in broadcasting. *The National Driver's Test* was by all odds the year's most unusual and freshest program. First presented in prime time on May 24 (it was repeated on August 30), *The National Driver's Test* drew 31 million viewers. In one hour it offered viewers a number of driving situations and a method of measuring their own driving skills against groups of drivers in several cities across the country. As the television industry is quick to capitalize on any success, the 1965–66 season may see a rash of similar programs. NBC News, for instance, announced a series of five such programs, testing the aptitudes and interests, political beliefs, prejudices, observation-perception, and reading abilities of the American people. CBS, following up its earlier triumph, televised *The National Citizenship Test* on November 23, and again scored a major success.

The New TV Season. Although ABC stole a march on its competitors in 1964 by offering its new programs early in the fall, all the networks agreed to start the 1965 season in the same week. As a result, viewers had from September 12 through September 19 in which to sample the 33 new offerings as well as their old favorites. The new programming offered few surprises and little that was fresh or venturesome. It was soon apparent that many programs would not survive the first two national Nielsen ratings.

One third of the new programs were situation comedies; several of these, following the lead of last season's *Man from UNCLE,* were of the "spying is fun" school. There were three or four Westerns, but the pronounced trend was toward either comedy or drama based on World War II. The success in past seasons of such programs as *McHale's Navy, Combat,* and *12 O'Clock High* made it inevitable that others would follow. Of the four new programs, *Hogan's Heroes,* a highly farcical comedy of life in a German prisoner-of-war camp, achieved a high degree of acceptance. Other successes of the season were *Get Smart, Green Acres,* and *Shenandoah,* all placing well within the first 20 programs, according to early Nielsen ratings. Movies on television increased with the addition of the *CBS Thursday Night Movie* and NBC's *Tuesday Night at the Movies.*

CBS

MY NAME IS BARBRA, an hour-long special televised in April, featured Barbra Streisand, who sang children's songs in a toy-house setting, accompanied by a quintet of young "musicians."

JULIE ANDREWS SHOW in November had Julie Andrews and Gene Kelly singing and dancing to medley of umbrella songs.

NBC

By December, the ratings picture had changed slightly. Two new television shows were in the top 10, and only one third of the 33 new shows were in the top 50 in popularity. These included, in addition to the four named above, *F Troop, Wild Wild West, Laredo, I Dream of Jeannie, Legend of Jesse James, Lost in Space,* and *The FBI.*

Another trend in program planning was toward serialization. Following the success in the 1964–65 season of ABC's twice- and thrice-weekly *Peyton Place*, NBC changed the format of *Dr. Kildare* from a weekly one-hour program to two half-hour programs presented on consecutive nights, with stories continuing over three or four segments.

Daytime television, once the sole domain of the serial story, became in 1965 the chief source of network profits, because of the increasing costs of nighttime production. In that year the three networks acquired more than 60% of their total profits from daytime revenues. CBS' long domination of daytime television was seriously challenged by the other networks in 1965.

Sports. Television and radio continued in 1965 to devote a large part of their schedules to sports events. Football coverage made financial news. According to *Broadcasting* magazine, college and professional football earned from radio and television broadcasting rights a total of $37 million, an increase of at least $6 million over the 1964 figure. As the magazine pointed out, "on the first weekend in August, deep in the heart of the baseball season, a true football fanatic in New York, Washington, or Houston could have watched—if he had the endurance and blessings of his spouse—about 12 to 13 hours of professional football on television." *Broadcasting* said that in 1965, sponsors were expected to pay $92 million to promote their products on football programs.

Awards. The National Academy of Television Arts and Sciences, which had faced a revolt by CBS and ABC over categories of its so-called Emmy awards—as well as over voting methods—in 1964, overhauled the system, simplifying the categories and placing the judging in the hands of panels. The resulting *1965 Emmy Awards Show*, by general agreement among viewers, critics, and people in the television industry, was disastrous. Playwright Rod Serling, president of the academy, freely granted that the program had been a failure and promised format revisions in order to recapture showmanship values. (See also PRIZES AND AWARDS.)

Educational TV. Financial problems continued to plague educational television and radio, although there were indications during the year that state and federal funds might be made available. New stations were started, and by the year's end 112 ETV stations were operating.

Personnel. There were significant changes in management at the networks. At CBS the powerful, financially successful president of CBS television, James T. Aubrey, made news when he resigned

THE MAGNIFICENT YANKEE, a January "Hallmark Hall of Fame" program, starred Alfred Lunt and Lynn Fontanne.

NBC

INHERIT THE WIND, shown in November, was a courtroom drama starring Melvyn Douglas (*left*) and Ed Begley (*right*).

NBC

NBC

THE HOLY TERROR, an April program, starred Julie Harris in a historical drama about Florence Nightingale.

abruptly on March 1. In September, Robert W. Sarnoff, board chairman of NBC, announced that at year's end he would move to the presidency of the parent company, RCA. He was to be succeeded by Robert E. Kintner, who, in addition to becoming NBC board chairman, would retain the NBC presidency. In December it was announced that Kintner would in fact become board chairman of NBC, but that Walter D. Scott, president of NBC Television Network, would become NBC president and chief executive officer. And, in December, it was announced that the American Broadcasting Company would merge with the International Telephone and Telegraph Corporation, but would retain its present management.

Federal Communications Commission (FCC). The FCC, early in the year, proposed that networks be banned from any ownership interest in more than 50% of the programs broadcast in prime time. The results of this proposal may become clear in 1966.

Radio. Radio enjoyed a continuing boom in 1965. The popularity of radio programs was so great that FCC figures as of the end of September showed 342 applications for new AM radio stations. The trend away from music as the programming mainstay to talk and telephone-answering shows—a feature of radio stations in large cities in 1964—was extended into smaller communities in 1965.

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Television Producer
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TELEVISION AND RADIO ENGINEERING

The most striking technical development in television in 1965 concerned color television. Other developments included the growth of Community Antenna Television systems and television stations, the launching of the first commercial communications satellite, and the attempt by the Federal Communications Commission (FCC) to regulate the loudness of radio and television commercials.

Color Television Explosion. New color receivers featured both improved circuitry and much brighter picture tubes. The new tubes employed phosphors derived from rare-earth minerals. The present system of color television broadcasting dates back to 1954, but its growth had been slow. In 1965, however, new color studio cameras were introduced for both live and film pickups, with improved resolution and definition, as well as more faithful color rendition. The result was that color television rapidly found unprecedented public acceptance.

Community Antenna Television (CATV) Systems. These systems, which receive television signals and deliver them to subscribers' homes by cable, continued to expand at an increasing pace in 1965. Recent developments include origination of local programs, and microwave relay systems to bring in distant stations. Furthermore, modern systems have a 12-channel capacity, compared with the 3- to 5-channel capacity of earlier systems. CATV systems, at first intended to serve small communities, are under construction in larger cities, even cities that are already well served by television broadcasting stations.

During 1965, an estimated 100 new CATV systems went into operation, bringing the total to approximately 1,600 systems serving 2 million homes.

Television Station Growth. UHF (ultra-high frequency, channels 14–83) television stations experienced a renewed growth in 1965. Because only a small number of VHF (very high frequency, channels 2–13) channel assignments remain unused, virtually all future expansion of television broadcasting will have to take place in the UHF band. All new television receivers are now required by law to provide all-channel reception.

The total number of commercial stations on the air increased in 1965 from 586 to 600, 11 of which were new UHF stations. Educational stations increased from 89 to 100, 8 of which were new UHF stations. At the year's end, the FCC had a backlog of 156 UHF applications.

Throughout the rest of the world, television broad-

OUTSTANDING U.S. TELEVISION PROGRAMS OF 1965

(Excluding news events)

Abortion and the Law (*CBS Reports*)—A presentation of the legal, moral, psychiatric, and medical attitudes toward abortion, and the problem in the United States as compared with the problem in several other countries. CBS, April 5.

American White Paper: United States Foreign Policy—A 3½-hour review of U.S. foreign policy since World War II. NBC, Sept. 7.

Berkeley Rebels, The—A documentary about the ferment on American college campuses, narrated by Harry Reasoner. CBS, June 14.

Cinderella—A revival of Rodgers and Hammerstein's musical version of the fairy tale, written for television in 1957. CBS, Feb. 22.

Custer to the Little Big Horn—A documentary about Gen. George Custer and his ill-fated meeting with Sitting Bull, narrated by John Secondari. ABC, April 9.

Decision to Drop the Bomb, The (*NBC White Paper*)—The 135 days between the death of President Franklin D. Roosevelt and the decision to drop the first atomic bomb on Hiroshima, narrated by Chet Huntley. NBC, Jan. 5.

FDR Remembered—An affectionate look at the late President Franklin D. Roosevelt as a father and a friend, on the 20th anniversary of his death. CBS, April 12.

Frank Sinatra—A Man and his Music—A special with Frank Sinatra singing the songs most closely associated with him during the past 25 years. NBC, Nov. 24.

French Revolution, The—A documentary covering the years of French history between the convening of the Estates-General and the rise of Napoleon. NBC, Jan. 26.

Grand Canyon: A Journey With Joseph Wood Krutch—A mule trip to the bottom of the Grand Canyon, and a voyage down the Colorado River rapids, with naturalist-author Joseph Wood Krutch as a guide. NBC, June 1.

Hollow Crown, The—The kings and queens of England as seen by themselves and others in poetry, speeches, and letters, starring British stage performers Dorothy Tutin and Max Adrian. CBS, Part I, Feb. 16; Part II, June 20.

Holy Terror, The (*Hallmark Hall of Fame*)—Julie Harris as Florence Nightingale in an original television drama about the great nurse's efforts to bring sanitation and compassion into British army hospitals. NBC, April 7.

I, Leonardo da Vinci (*Saga of Western Man*)—The life and career of the great Renaissance artist, narrated by Fredric March. ABC, Feb. 23.

Inherit the Wind (*Hallmark Hall of Fame*)—A television adaptation of the stage play based on the Scopes "monkey trial" of the 1920's, starring Melvyn Douglas and Ed Begley. NBC, Nov. 18.

It's What's Happening, Baby!—Disc jockey Murray the K hosting a musical special for teenagers, aimed at the rehabilitation of dropouts. CBS, June 28.

SUMMARY OF WORLD TELEVISION, 1965

Country	No. of transmitting stations	No. of TV sets
Aden	5	13,500
Albania	1[1]	1,000
Algeria	6	100,000
Argentina	14	1,600,000
Australia	52	2,000,000
Austria	18[2]	678,000
Belgium	15	1,600,000
Bermuda	2	14,000
Brazil	41	2,300,000
Bulgaria	1[3]	66,000
Canada	257	5,310,000
Canary Islands	1	......[4]
Chile	3	50,000
China, Communist	30	100,000
Colombia	15	300,000
Costa Rica	3	50,000
Cuba	25	500,000
Cyprus	3	16,000
Czechoslovakia	21[2]	2,240,000
Denmark	17	1,200,000
Dominican Republic	4	35,000
Ecuador	3	35,000
El Salvador	3	35,000
Finland	46	765,000
France	38[2]	5,400,000
Germany, East	15[2]	3,000,000
Germany, West	109[2]	10,900,000
Ghana	3	......[4]
Gibraltar	1	5,200
Guatemala	2	55,000
Haiti	1	3,500
Honduras	3	6,500
Hong Kong	1[5]	50,000
Hungary	11	675,000
Indonesia	2	45,000
Iran	3	110,000
Iraq	1	120,000
Ireland	20	370,000
Israel	...	30,000[6]
Italy	61[2]	5,756,000
Jamaica	7	25,000
Japan	150[2]	16,000,000
Kenya	2	8,500
Korea	3	45,000
Kuwait	3	60,000
Lebanon	8	130,000
Luxembourg	1[7]	29,000
Malaysia	8	60,000
Malta	1	29,500
Mexico	29	1,800,000
Monaco	1	12,000
Morocco	4	20,000
Netherlands	8	2,100,000
Netherlands Antilles	2	25,000
New Zealand	10[2]	430,000
Nicaragua	2	16,000
Nigeria	9	30,000
Norway	22[2]	460,000
Okinawa	2	120,000
Pakistan	2	10,000
Panama	7	70,000
Peru	16	175,000
Philippines	13	120,000
Poland	18[7]	2,000,000
Portugal	4[7]	168,000
Rhodesia	2	43,000
Rumania	8	400,000
Samoa	6	600
Saudi Arabia	2	30,000
Spain	16[2]	1,500,000
Sweden	92[2]	1,965,000
Switzerland	18[7]	590,000
Syria	5	120,000
Taiwan	4	30,000
Thailand	5	200,000
Trinidad	1	20,000
Uganda	5	5,800
United Arab Republic	16	350,000
United Kingdom	95	15,000,000
United States	738	70,350,000
Uruguay	4	175,000
USSR	116[2]	15,000,000
Venezuela	26	850,000
Yugoslavia	23[2]	560,000

[1] Experimental. [2] A number of low-power satellite transmitters in operation are not included in this figure. [3] Plus 18 relays. [4] Estimate unavailable. [5] Closed-circuit cable system. [6] Receives programs from neighboring countries. [7] A number of low-power repeaters in operation are not included in this figure. [8] Receives programs from Italy. Source: *Television Factbook*.

casting continued to grow. The accompanying table lists the number of transmitters and home receivers in various countries in 1965.

Commercial Communications Satellites. The Communications Satellite Corporation (COMSAT) launched the Early Bird communications satellite for commercial use in 1965, and television relaying was begun between the United States and Europe. Early Bird is stationed over the equator at longitude 27.5°W at a synchronous altitude of 22,300 miles above the earth's surface, where it appears to hang motionless. Early Bird commands a view of all of the eastern United States, western Europe, South America, and Africa. (See SPACE EXPLORATION.)

Proposals have been made for direct television broadcasting from communication satellites into homes. However, there are formidable technical problems that must be surmounted before this can be achieved. Present studies indicate that even experimental broadcasting from communications satellites to homes is probably a great many years away.

Loud commercials. In 1965, the FCC issued to radio and television broadcasters technical guidelines for minimizing excessive loudness in the presentation of commercials. These guidelines are complicated by the fact that because loudness is largely a subjective phenomenon, no simple set of engineering rules can be laid down to define it.

Under the new FCC policy, broadcasters are encouraged to use various measures to minimize the loudness of commercials. These include the simple avoidance of excessive volume, and any unnecessarily drastic changes in sound level. Broadcasters are also urged to avoid rapid, strident deliveries by announcers, and the use by audio engineers of special filters and reverberation chambers to increase loudness.

Home Video-Tape Recorders. Early in 1965, videotape recorders were perfected for recording and playing back television pictures in the home. Simpli-

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Jimmy Durante Meets the Lively Arts—The veteran comedian presenting such "long-hair" artists as ballet dancer Rudolf Nureyev and opera singer Roberta Peters. ABC, Oct. 30.

Journals of Lewis and Clark, The—A documentary following the route of the explorers of the American Northwest, with a narration based on excerpts from their diaries. NBC, Feb. 23.

Julie Andrews Show, The—An hour-long special starring singer Julie Andrews and Gene Kelly, with the New Christy Minstrels. NBC, Nov. 28.

KKK—The Invisible Empire (*CBS Reports*)—Charles Kuralt reporting on the Ku Klux Klan's strength, methods, leaders, and purposes. CBS, Sept. 21.

Magnificent Yankee, The (*Hallmark Hall of Fame*)—Emmet Lavery's play about Supreme Court Justice Oliver Wendell Holmes, starring Alfred Lunt and Lynn Fontanne. NBC, Jan. 28.

Making of the President, 1964, The—A documentary based on Theodore White's book about the 1964 presidential campaign and election, narrated by Martin Gabel. CBS, Oct. 19.

Martin's Lie—A religious opera by Gian Carlo Menotti, commissioned by CBS and written expressly for television. CBS, May 30.

My Name is Barbra—Barbra Streisand singing, dancing, and clowning in her first hour-long special. CBS, April 28.

Mystery of Stonehenge, The—An explanation of Stonehenge, England, as an astronomical observatory rather than a Druid temple. CBS, Feb. 1.

National Citizenship Test, The—A test for home viewers on the rights and responsibilities of the American citizen. CBS, Nov. 23.

National Driver's Test, The (*CBS Reports*)—A simulated driving test that viewers could take in their own living rooms. CBS, May 24.

Oswald and the Law (*NBC White Paper*)—With the Lee Harvey Oswald case as a point of departure, an examination of criminal justice in the United States; narrated by Chet Huntley. NBC, Feb. 9.

Pope and the Vatican, The—Pope Paul VI and current trends in the Roman Catholic Church, a documentary narrated by Irving R. Levine. NBC, March 9.

Some Friends of Adlai Stevenson—An international tribute to the late U.S. ambassador to the United Nations, transmitted via Early Bird satellite, with Vice President Hubert Humphrey, Prime Minister Harold Wilson, and poet Archibald MacLeish. CBS, July 19.

Some Friends of Winston Churchill—A tribute to the late prime minister by men who knew him well, including Lord Ismay, Churchill's closest military adviser in World War II, and former President Dwight D. Eisenhower. CBS, Jan. 25.

Spanish Armada, The (*Of Men and Freedom*)—A documentary tracing the 16th century struggle for world domination between Britain and Spain that culminated in the destruction of the Spanish Armada. NBC, Nov. 14.

Visit to Washington with Mrs. Lyndon B. Johnson, A—A special program on behalf of a more beautiful America, with Mrs. Johnson as narrator and guide on a tour of national landmarks. ABC, Nov. 25.

fied versions of these recorders were put on the market at prices under $1,000, and some employed simple home television cameras priced as low as $300.

Radio Station Growth. AM and FM radio broadcasting continued to expand in 1965. The number of AM stations increased from 4,000 to 4,042, and the number of FM stations from 1,244 to 1,423. The number of radio receivers in use likewise increased during 1965, and more than 30 million radio receivers were produced and sold during the year.

HOWARD T. HEAD
Consulting Radio Engineer

TENNESSEE

A deadlock between Democratic factions in the election of a Senate speaker delayed for several days the organization of the legislature which convened in January 1965. Finally, the Republican minority helped to elect the governor's administration candidate as speaker.

Legislative Actions. The General Assembly enacted a record-breaking budget, which increased support of education and included provisions for three new junior colleges and many vocational training schools.

TENNESSEE · Information Highlights

Area: 42,244 square miles.

Population: 3,737,000 (1965 est.).

Chief Cities (1965 est.): Nashville, the capital (261,000); Memphis (525,000); Knoxville (181,000); Chattanooga (127,500); Jackson (34,400); Kingsport (34,000); Johnson City (33,800); Oak Ridge (30,000).

Government: *Chief Officers*—governor, Frank G. Clement (Democrat); lt. gov., Senator Jared Maddux (D); secy. of state, Joe C. Carr (D); atty. gen., George F. McCanless; treas., James Alexander (D); supt. of pub. instr., J. Howard Warf (D); chief justice, Hamilton S. Burnett. *Legislature*—General Assembly (convened Jan. 4, 1965); Senate, 33 members (25 Democrats, 8 Republicans); House of Representatives, 99 members (74 D, 24 R, 1 other).

Education: *School enrollment* (1964–65)—public elementary, 588,000 pupils (19,215 teachers); public secondary, 310,000 pupils (11,315 teachers); nonpublic schools, 36,000 pupils (1,610 teachers); college and university (fall 1964), 87,726 students. *Public school expenditures* (1964–65)—$245,800,000 ($300 per pupil); average teacher's salary, $4,850.

Public Finance (fiscal year 1964): *Revenues*, $706,179,000 (3% sales tax, $147,289,000; motor fuel tax, $89,311,000; federal funds, $198,186,000). *Expenditures*, $658,856,000 (education, $217,525,000; health, welfare, and safety, $79,911,000; highways, $220,053,000). *State debt*, $149,430,000 (1964).

Personal Income (1964): $7,061,000,000; average annual income per person, $1,859.

Public Assistance (fiscal year 1965): $52,884,905 to 136,598 recipients (aged, $24,436,712; dependent children, $19,141,985).

Labor Force (employed persons, July 1965): *Agricultural*, 161,000; *nonagricultural* (wage and salary earners), 1,109,900 (34.7% manufacturing, 19.7% trade, 16.7% government). *Unemployed persons* (July 1965)—47,400.

Manufacturing (1963): Value added by manufacture, $3,343,790,000 (transportation equipment, $102,554,000; primary metals, $167,569,000; nonelectrical machinery, $111,483,000; electrical machinery, $230,145,000; fabricated metals, $144,453,000; food and products, $362,969,000; chemicals and allied products, $821,989,000; apparel and related products, $276,087,000; textile mill products, $183,342,000; stone, clay, and glass products, $176,700,000).

Agriculture (1964): *Cash farm income*, $620,185,000 (livestock, $275,523,000; crops, $313,454,000; govt. payments, $31,209,000). *Chief crops* (tons)—corn for grain, 1,331,000 (ranks 15th among the states); cottonseed, 277,000 (rank, 7th); tobacco, 72,000 (rank, 5th); sweet potatoes, 18,000 (rank, 12th); hay, 1,856,000; wheat, 131,000; oats, 39,000; potatoes, 23,000; barley, 71,000; sorghum grain, 15,000; apples, 9,600; peaches, 5,300; rye, 5,000.

Mining (1964): *Production value*, $173,965,000 (ranks 27th among the states). *Chief minerals* (tons)—coal, 5,990,000 (rank, 9th); phosphate rock, 2,734,000 (rank, 2nd); zinc, 115,943 (rank, 1st); copper, 13,889 (rank, 7th); silver, 91,000 troy ounces (rank, 12th); gold, 133 troy ounces (rank, 13th).

Fisheries (1963): *Commercial catch*, 12,669,000 pounds ($1,227,000).

Transportation: *Roads* (1965), 76,034 miles (74,001 surfaced); *motor vehicles* (1963), 1,734,899; *railroads* (1964), 3,400 potatoes, 23,000; barley, 17,000; sorghum grain, 15,000;

Communications (1965): *Telephones*, 1,352,000; *television stations*, 17; *radio stations*, 164; *newspapers* (1965), 28 (daily circulation, 1,071,957 in 1964).

Other legislation provided for expanding the highway program and the state park system, and for expanding and modernizing mental health facilities and procedures. A new law outlawing obscene literature replaced previous legislation which had been declared unconstitutional, and a law banning nudist colonies resulted in a court test which had not been decided by the end of the year.

Reapportionment. At a special session in May, the General Assembly revised legislative and congressional districts in an effort to conform to recent court decisions. In accordance with the U.S. Supreme Court's "one-man, one-vote" ruling, urban counties were subdivided into individual districts for both houses of the legislature, even though the state constitution prohibits dividing any county into senatorial districts.

A three-judge federal court accepted the legislative reapportionment, stating that the division of counties for senatorial representation did not violate the national Constitution. The court objected to the congressional reapportionment, but gave the legislature until June 1967 to correct the inequities.

Constitutional Convention. A state constitutional convention convened in July and reconvened in November to act on reapportionment. It proposed apportionment of the Senate according to population, and the House of Representatives "according to law." Other amendments proposed by the convention provide for annual pay for legislators, longer legislative sessions, an increase of state senatorial terms from two to four years, and the requirement that senators be qualified voters of their districts and that representatives be residents of theirs. The proposed amendments will be voted on in November 1966.

TVA. The Tennessee Valley Authority became involved in a controversy over its proposal to build a dam near the mouth of the Little Tennessee River. The dam, intended to bring industries into the area, would result in flooding bottom lands, fishing grounds, and historic sites. Congressman J.L. Evins succeeded in getting Congress to substitute an appropriation for the projected Tims Ford Dam across the Elk River in central Tennessee.

Education. Commissioner of Education J.H. Warf announced in December that nearly 30,000 Negro children were attending racially mixed public schools in the state, and that Tennessee ranked second highest among 11 Southern states in the rate of school integration. Also, considerable progress was being made in integrating Negro teachers as well as pupils in the schools.

Economy. Tennessee's economy continued to reflect the longest boom period in the modern history of the United States. In 1965, cash receipts of farmers and nonagricultural employment, after temporary declines, outstripped the records of the preceding year.

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TENNIS. See SPORTS.

TEXAS

The Texas Legislature's biennial session in 1965 was highlighted by the redistricting of seats in the state House of Representatives, the state Senate, and the U.S. House of Representatives, in compliance with federal court reapportionment orders.

BLACK STAR

THE HOUSTON ASTRODOME, an air-conditioned, domed stadium for Houston sports teams, was completed in 1965.

The redistricting, which greatly increased representation from the major metropolitan areas, went far toward equalizing the population among districts. However, a controversy over certain inconsistencies in the redistricting acts for the state and the U.S. House of Representatives led to a renewal of litigation.

At the end of the year, federal courts in Texas had under consideration a suit brought by the U.S. attorney general's office challenging the constitutionality of the poll tax as a prerequisite for voting in state elections.

Amendment Defeats. Of 11 constitutional amendments presented to the voters in 1965, six were defeated. Among the defeated amendments were proposals to increase the size of the state Senate and to provide four-year terms for members of the House. Voters also rejected a proposed amendment giving the governor and other state officials four-year terms. Gov. John Connally was the chief backer of the latter proposal, but its defeat was not expected to damage seriously his chances for reelection to a third term in 1966.

Politics. On the political front, acrimonious disputes between conservative Democrats, led by Governor Connally, and liberal Democrats, led by U.S. Sen. Ralph Yarborough, accented the division in the Texas Democratic party. Similarly, Texas Republicans, as they attempted to recover from their election defeat in 1964, were split into ultra- and moderate-conservative groups.

Governor Connally dominated the legislative scene in 1965. Although he held the state to a course of moderate conservatism, there were important developments in several areas involving both substantive policy and administrative organization.

Education. The spotlight was on education in 1965. In an attempt to revitalize the state's colleges and universities, the Legislature enacted almost all of the governor's program for these institutions. Measures enacted included establishing an 18-member Coordinating Board and granting an increase in appropriations. Two constitutional amendments approved by the voters set up a $75 million college student loan fund and extended and increased a property tax levy for college building programs.

Primary and secondary education also received attention. Governor Connally won legislative approval for a commission to study the conditions and needs of the public schools. Pressure from the Texas State Teachers' Association produced sizable increases in teachers' salaries, financed mainly by higher taxes on cigarettes.

Conservation. The long-overdue Mineral Pooling Act of 1965 authorized the State Railroad Commission to take action to reduce the unnecessary drilling that has burdened the oil industry. A gesture was made toward curbing air pollution by the passage of a limited Clean Air Act, and the power of the Texas Water Pollution Control Board was strengthened somewhat. The state moved to expand its water development program by creating a new Texas Water Development Board and by authoriz-

TEXAS · Information Highlights

Area: 267,339 square miles.

Population: 10,669,000 (1965 est.).

Chief Cities (1965 est.): Austin, the capital (220,000); Houston (1,100,000); Dallas (790,000); San Antonio (645,000); Fort Worth (360,000); El Paso (309,000); Corpus Christi (195,000); Amarillo (164,000).

Government: *Chief Officers*—governor, John Connally (Democrat); lt. gov., Preston Smith (D); secy. of state, Crawford Martin (D); atty. gen., Waggoner Carr (D); treas., Jesse James (D); comm. of educ., J.W. Edgar; chief justices—Supreme Court for Civil Cases, Robert W. Calvert; Court of Criminal Appeals for Criminal Cases (presiding judge), W.T. McDonald. *Legislature* (convened Jan. 12, 1965)—Senate, 31 members (31 Democrat, 0 Republicans); House of Representatives, 150 members (149 D, 1 R).

Education: *School enrollment* (1964–65)—public elementary, 1,433,359 pupils (54,873 teachers); public secondary, 1,026,705 pupils (42,403 teachers); nonpublic schools, 171,300 pupils (5,690 teachers); college and university (fall 1964), 261,041 students. *Public school expenditures* (1964–65)—$880,000,000 ($396 per pupil); av. teacher's salary, $5,461.

Public Finance (fiscal year 1965): *Revenues,* $2,643,762,547 (2% sales tax, $221,987,958; motor fuel tax, $229,174,517; federal funds, $439,371,149). *Expenditures,* $2,520,712,126 (education, $699,094,282; health,, welfare, and safety, $399,733,926; roads and highways, $435,984,851). *State debt,* $313,315,043 (Aug. 31, 1965).

Personal Income (1964): $22,749,000,000; average annual income per person, $2,188.

Public Assistance (fiscal year 1965): $225,706,890 to 339,913 recipients (aged, $159,175,410; dependent children, $20,722,987).

Labor Force (employed persons, Aug. 31, 1965): *Agricultural,* 343,200; *nonagricultural* (wage and salary earners), 3,466,700 (16.9% manufacturing, 26.3% trade, 14.3% government). *Unemployed persons* (Aug. 31, 1965)—141,000.

Manufacturing (1963): Value added by manufacture, $7,053,797,000 (transportation equipment, $609,822,000; primary metals, $381,757,000; nonelectrical machinery, $501,640,000; electrical machinery, $295,649,000; fabricated metals, $312,763,000; food and products, $923,362,000).

Agriculture (1964): *Cash farm income,* $2,477,950 (livestock, $1,033,809,000; crops, $1,270,602,000; govt. payments, $173,539,000). *Chief crops* (tons)—sorghum grain, 6,044,000 (ranks 1st among the states); hay, 2,753,000 (rank, 18th); wheat, 1,855,000 (rank, 8th); cotton lint, 990,000 (rank, 1st); cottonseed, 1,738,000 (rank, 1st); rice, 982,000 (rank, 1st); sugar beets, 539,000 (rank, 11th); oats, 391,000 (rank, 11th).

Mining (1964): *Production value,* $4,533,078,000 (ranks 1st among the states). *Chief minerals* (tons)—petroleum, 989,525,000 barrels · (rank, 1st); natural gas, 6,525,649,000,000 cubic feet (rank, 1st); salt, 6,410,000 (rank, 1st); sulfur (Frasch process), 3,501,000 (rank, 1st); lime, 1,350,000 (rank, 4th); gypsum, 1,131,000 (rank, 4th).

Fisheries (1964): *Commercial catch,* 145,070,000 pounds ($29,528,000). *Leading species*—shrimp, 66,053 pounds ($26,144,000); menhaden, 66,686,000 pounds ($822,000).

Transportation: *Roads* (1965), 202,132 miles (76,896 surfaced); *motor vehicles* (1965), 5,891,340; *railroads* (1964), 20,504 miles; *aircraft* (1964), 11,093 (812 airports).

Communications (1965): *Telephones,* 4,277,800; *television stations,* 45; *radio stations,* 326; *newspapers,* 121 (daily circulation, 3,015,562).

ing another $100 million in state funds for financing water projects. The long-sought federal Trinity River project was finally authorized and given initial funding by Congress.

Minority Groups. The pressures of federal legislation, court orders, and administrative action on behalf of civil rights continued to produce positive results in Texas. An estimated 72,000 Negro children were attending classes with white pupils in the fall of 1965, and desegregation in part or in whole became the official policy of most if not all of the state's school districts.

The municipal government of Crystal City, controlled by persons of Mexican descent since 1963, changed hands in the 1965 elections. Although the Mexican ticket was defeated, Mexicans were not excluded from the city government. The victorious faction represented a coalition of Mexican and other groups. (See also HOUSTON.)

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TEXTILE INDUSTRY

The United States textile industry in 1964 imported or produced enough materials to provide each person in the country with about 22.6 pounds of cotton, 15.8 pounds of man-made fibers, and 2.5 pounds of wool. These figures, based on the fiber consumption of U.S. textile mills, excluded exports but include imports of fabricated products.

Fiber Consumption. U.S. mill consumption of fibers continued to rise in 1965. The annual rate of consumption in the first six months was 8,380,000,000 pounds, or 9% more than in 1964. In turn, the 1964 consumption ran 7.5% ahead of 1963. The 1965 annual rates of mill consumption, based on half-year data, showed raw cotton up 7% over 1964, man-made fibers up 12%, wool up 8%, and silk down 13%.

Cotton continued to lead all textile fibers in pounds consumed, accounting for 54% of total fiber consumption in the first half of 1965, as compared with 55% in the full year 1964. The man-made fibers share of total consumption in the first six months of 1965 was 41%, as compared with 40% in the full year 1964. Raw wool accounted for 5% of the total in both 1965 and 1964.

SELECTED U.S. TEXTILE STATISTICS

Fiber Consumption	Year 1962	Year 1963	Year 1964	First half 1965
		(millions of pounds)		
Raw cotton	4,192	4,034	4,255	2,279
Raw wool, total[1]	429	412	355	193
Apparel class	280	252	233	136
Carpet class	149	160	122	57
Raw silk	6	4	5	2
Man-made fibers[2]	2,347	2,699	3,072	1,718
Rayon + acetate yarn	669	687	770	403
Rayon + acetate staple	595	754	747	379
Noncellulosic yarn[3]	571	655	797	450
Noncellulosic staple[4]	328	421	537	354
Textile glass fiber	184	182	221	132
Total fibers	6,974	7,149	7,687	4,192
Tire Cord and Fabric Output[5]				
Cotton	3	1	...	
Nylon + polyester	187	204	237	127
Rayon	208	196	210	112
Total tire cord and fabric	398	401	447	239
Broad Woven Fabric Output[6]				
		(millions of linear yards)		
Cotton fabrics	9,249	8,759	8,973	4,732
Man-made fiber fabrics	2,707	3,028	3,488	1,939
Woolen and worsted fabrics[7]	310	284	255	139
Silk fabrics	23	18	18	10
Paper and other fabrics	13	15	10	4
Total broad woven goods	12,302	12,104	12,744	6,824

[1] Clean basis. [2] U.S. producers' domestic shipments plus imports for consumption. [3] Includes acrylic, nylon (polyamide), olefin (polyethylene and polypropylene), saran, spandex, vinyon (polyvinyl chloride), and TFE-fluorocarbon fiber. [4] Includes acrylic and modacrylic, nylon, olefin, polyester, and vinyon. [5] Excluding chafer fabric. [6] Except tire fabric. [7] Excluding carpets, rugs, and felts.

Man-made fibers led in dollar value. In 1964, the mill consumption of man-made fibers was valued at $2,460,000,000 (59% of the total value for all fibers), as compared with an estimated $1,170,000,000 (28% of the total) for raw cotton, $495,000,000 (12%) for raw wool, and $25,000,000 (1%) for silk.

Tire Cord and Fabric Production. For the first half of 1965, production of tire cord and fabric was 239,000,000 pounds, or 10% more than in the same period of 1964. Nylon shared the market equally with rayon in 1963, but nylon increased to 53% of the total in both 1964 and the first half of 1965.

Broad Woven Fabric Output. Based on data covering the period January–June 1965, the year's output will exceed the 1964 total by 7%, with cottons up 5.5%, man-made fiber fabrics up 11%, and wool up 7%. U.S. production of broad woven goods in 1964 totaled 12,744,000,000 yards, an increase of 5% over 1963. The corresponding percentage change in yardages was as follows: cotton fabrics, up 2.5%; man-made fiber fabrics, up 15%; woolen and worsted fabrics, down 10%; and silk and other fabrics, down 15%.

Prices. Under the federal plan to stabilize cotton prices (effective April 11, 1964), a subsidy equivalent to 6.5 cents per pound of cotton is payable to exporters and domestic mills. Including this payment, the price of 1-inch middling raw cotton averaged 24.2 cents per pound during the first eight months of 1965. The average for the same period in 1964 was 29.2 cents.

For the first eight months of 1965 the average price of raw wool (clean basis, at Boston) was $1.24 per pound, or 16 cents lower than the average for the year 1964. Listed prices of rayon staple and acetate staple remained at 28 and 40 cents per pound, respectively.

Employment and Earnings. Employment in U.S. knitting and weaving mills and in finished textile products plants averaged 2,016,000 workers in the first half of 1965, a small increase over the average for 1964. During the same period, the average weekly gross earnings of mill workers was $76.31, or 4.5% above the 1964 average. For workers in apparel cutting and related trades, weekly wages averaged $65.89, or 2.5% above the 1964 level.

International Trade. In 1964, the U.S. textile industry had an export balance of $289,000,000. The value of exports of all textile fibers and products totaled $1,501,000,000. Imports of textile fibers and products totaled $1,212,000,000. The years 1962 and 1963 showed import balances, due mainly to increased cotton textile imports, with the 1963 import balance of $289,000,000 being the largest ever recorded.

Over the first six months of 1965 the import balance stood at $4,000,000. The year's exports were projected at $1,293,000,000, and imports at $1,301,000,000.

Flax and Linen Imports. Imports of raw flax and linen yarns totaled 10,400,000 pounds in 1964, compared with 9,300,000 pounds in 1963. Total imports of linen and chiefly-linen fabrics amounted to 25,800,000 pounds in 1964, up 7.5% over 1963.

Canadian Textiles. Industry shipments of cotton fabrics in Canada totaled 315,000,000 square yards in 1964, up 1,000,000 square yards over 1963. Wool fabric output increased 1,000,000 square yards, to 37,000,000 square yards. Man-made fiber fabric shipments totaled 189,000,000 square yards, a rise of 16,000,000 square yards, or 9%. Total 1964 shipments of these fabrics showed an increase of 5%.

Canadian production of rayon and acetate yarn and staple in 1964 was 108,000,000 pounds, an increase of 11,100,000 pounds, or 11%, over 1963. Noncellulosic fiber output totaled 65,600,000 pounds in 1964, up 13% over the 1963 output of 58,000,000 pounds.

Employment in the Canadian textile industry in December 1964 totaled 84,450 workers, an increase of 3,252 over the December 1963 total.

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THAILAND

ASIA
AUSTRALIA

Thailand was the target of a major effort of subversion by Chinese Communists in 1965. Although the effort proved unsuccessful, the Communist threat remained as the greatest danger to the Thai community. The government of Field Marshal Thanom Kittikachorn remained stable amid modest economic prosperity and development.

The Communist Threat. Early in 1965, Communist China's foreign minister, Chen Yi, was reported to have promised guerrilla warfare in Thailand within a year. Later in the year, Peking announced the merger of two Communist-supported groups, the Thailand Independent Movement and the Thailand Patriotic Front, which are dedicated to the overthrow of the Thai government and to the eviction of all U.S. forces from Thailand.

The Communists concentrated their efforts primarily in northeastern Thailand, particularly in economically depressed Nakhon Phanom province along the southern Laotian border. The population in that area was subjected to a heavy Communist propaganda campaign, and some of the pro-Laotian Thais there were supplied with arms. In addition, approximately 40,000 Vietnamese inhabit the area, and most of them seem to be sympathetic to the North Vietnamese government. It was estimated that several thousand Thais have defected to the Communists in recent years.

Government Reactions. To combat these subversive forces, the Thai government instituted police and military action to destroy arms caches. The government also took action to eliminate clandestine radio broadcasts of the Voice of the People of Thailand, which broadcasts subversive programs believed to originate in either North Vietnam or Communist China.

The Thai government also combated the threat by emphasizing economic development for the northern and northeastern sections of the country. The U.S.-built Friendship Highway, connecting Bangkok with Udon (about 50 miles from Vientiane, Laos), was completed in January. The highway brought with it increased prosperity for the Udon area.

A number of Mobile Development Unit (MDU) teams—largely U.S. civilian civil engineers—and construction teams from the U.S. Navy's Seabees were sent into the Nam Pat, Sa, and Terng areas of northern Thailand to spearhead construction of schools, wells, and bridges. These construction efforts also were directed toward developing these isolated and economically depressed areas.

Foreign Relations. Thailand remained a close ally of the United States in 1965 and supported a "tough" policy in the Vietnam conflict. A U.S. military mission is stationed in Thailand. The headquarters of the Southeast Asia Treaty Organization is in Bangkok.

Thailand's relations with Cambodia remained clouded. In the summer of 1965, the Thai government announced that more than 200 Cambodian soldiers had invaded Trad Province in Thailand. Sharp fighting took place between the invaders and Thai soldiers.

Economy. Thailand's economy attained a modest growth in 1965. The country's gross national product continued at a rate of 6% annually. Export commodities were largely rice, rubber, teak, and tin, with rice supplying 35% of the country's total exports.

Manufacturing and industry continued to be practically nonexistent in the country, as Thailand still lacked raw materials and fuels.

Tourism, a major source of foreign exchange, has increased about 15% in recent years.

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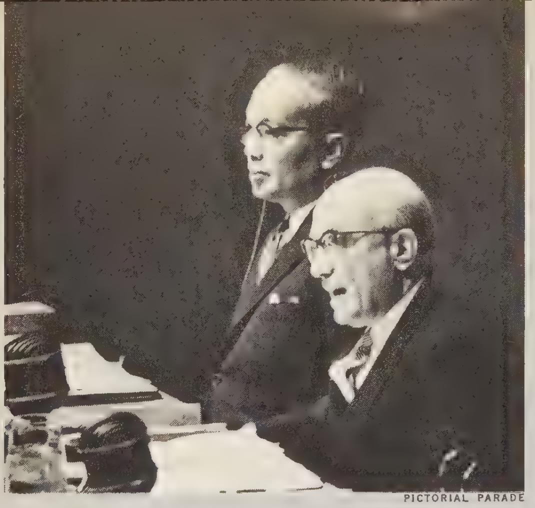
THAILAND · Information Highlights

Area: 198,455 square miles.
Population: 30,591,000 (July 1, 1965 est.).
Chief Cities (1963 urban est.): Bangkok, the capital, 1,608,305; Thonburi, 459,555.
Government: *King*—Bhumidol Adulyade (b. Dec. 5, 1927; acceded June 9, 1946); *Premier*—Thanom Kittikachorn (took office Dec. 8, 1963). *Parliament*—Constituent Assembly, 240 members (all appointed by the king).
Religious Faiths: Buddhists, 93% of population; Muslims, 3%; Confucianists, 2%; others, 2%.
Education: *Literacy rate* (1960)—68% of population aged 15 and over. *Total school enrollment* (1962)—4,605,389 (primary, 4,180,282; secondary, 294,621; teacher-training, 12,115; technical, 67,937; higher, 50,434).
Finance (1965 est.): *Revenues,* $503,000,000; *expenditures,* $593,000,000; *monetary unit,* baht (20.83 bahts equal U.S.$1).
Gross National Product (1963): $3,269,000,000.
National Income (1963): $2,784,000,000; average annual income per person, $97.
Economic Indexes (1964): *Agricultural production,* 155 (1956–57=100); *cost of living,* 101 (1958=100).
Manufacturing (metric tons, 1964): Cement, 1,043,000; sugar, 252,000; crude steel, 7,300.
Crops (metric tons, 1964): Rice, 9,625,000 (ranks 6th among world producers); cassava (1963), 2,000,000 (world rank, 3rd); rubber, 223,200 (world rank, 3rd); maize, 980,000; jute and kenaf (1963), 219,000; sweet potatoes and yams (1962), 190,000; peanuts, 125,000; soybeans, 27,000.
Minerals (metric tons, 1964): Tin, 15,845 (ranks 6th among world producers); salt, 249,000; lignite, 103,000; fluorspar (1963), 29,230; iron ore, 15,200; manganese, 11,054; lead, 3,656.
Foreign Trade (1964): *Exports,* $599,000,000 (chief exports: rice, $214,000,000; rubber, $99,000,000; tin, $46,000,000); *imports,* $667,000,000 (chief imports, 1963): nonelectrical machinery, $70,000,000; motor vehicles, $53,100,000; petroleum products, $53,000,000). *Chief trading partners* (1963): Japan (took 19% of exports, supplied 32% of imports); U.S. (took 7% of exports, supplied 17% of imports); Indonesia (took 8% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 7,130 miles (3,005 paved); *motor vehicles* (1964), 145,466 (automobiles, 69,450); *railways* (1963), 2,235 miles; *merchant vessels* (1964), 9 (17,000 gross registered tons); *national airlines*—Thai Airways, Thai International Airways; *principal airport,* Bangkok.
Communications: *Telephones* (1964): 55,219; *television stations* (1964), 5; *television sets* (1964), 200,000; *radios* (1960), 163,000; newspapers (1960), 27 (daily circulation, 286.000).


PICTORIAL PARADE

UN SECRETARY-GENERAL THANT (l.) shares rostrum with General Assembly President Amintore Fanfani of Italy.

SECRETARY GENERAL
UPI

IN THE SECURITY COUNCIL, Secretary-General Thant proposes, September 17, a five-point program to end the Indian-Pakistani dispute. At his left sits Council President Arthur Goldberg, the U.S. ambassador to the UN.

DURING A PEACE MISSION on the Kashmir dispute, Thant talks with reporters at London airport on September 8.

UPI

THANT, U

Burmese statesman and secretary-general of the United Nations: b. Pantanaw, Burma, Jan. 22, 1909.

In the fourth year of his five-year term as secretary-general of the United Nations, U Thant was occupied chiefly with attempts to preserve world peace and to prevent the United Nations Organization itself from disintegrating. He tried to dissuade Indonesia's President Sukarno from withdrawing his country from the United Nations. He journeyed to India and Pakistan for talks with the leaders of those states, hoping to persuade them to make a peaceful settlement of their dispute over Kashmir. And he lent his influence to the unsuccessful efforts to bring about a negotiated settlement of the war in Vietnam.

A Year of Crises. A crisis that carried over from 1964 and threatened to destroy the United Nations in 1965 concerned the procedures under which the United Nations operates. With the United States and the Soviet Union—the United Nations' two most powerful members—at loggerheads over the financing of certain peacekeeping operations, Thant was barely able to keep the organization intact. It was forced to function on Thant's so-called consensus plan until late in the year when the issue was resolved.

The new year had hardly begun when Indonesia, objecting to the seating of Malaysia in the Security Council, threatened to leave the United Nations. Thant, in the Virgin Islands recuperating from an ulcer attack when informed of this development, cabled Indonesian President Sukarno, begging him not to jeopardize the future of the United Nations. However, on January 7, Malaysia became a member of the Security Council; and on January 21, Indonesia withdrew from the United Nations.

Thant achieved somewhat better results in the India-Pakistan dispute. He traveled to both countries (September 7–16) and held separate conferences with their leaders—President Ayub Khan and Prime Minister Shastri. Although his trip seemed to have been a failure, the United Nations eventually persuaded the two states to agree to a cease-fire, and Thant was instrumental in negotiating a temporary settlement of the issues.

The year's most nagging problem for U Thant, as well as for the rest of the world, was the impasse in Vietnam and the escalation of the war there. Throughout the year Thant made informal moves to bring both sides together for peace talks. In February he announced his plan whereby seven nations, including the United States and the Soviet Union, would discuss conditions for ending the war, but the plan was turned down. After the North Vietnamese government had ignored new mediation proposals put forward by Thant toward the end of 1965, there was some feeling among Asian members of the United Nations that Thant's influence as a peacemaker may have been damaged by the Vietnam failures. (See also ASIA; UNITED NATIONS.)

Early Life. Thant was educated at University College, Rangoon, Burma. He became a teacher of English and modern history and, finally, headmaster at the National School at Pantanaw. He was made director of broadcasting in Burma in 1948, and from 1957 was Burma's permanent representative at the United Nations. After the death of UN Secretary-General Dag Hammarskjöld in September 1961, Thant was elected acting secretary-general on Nov. 3, 1961, and was confirmed in the post on Nov. 30, 1962.

PETER DANESS

VIVIAN BEAUMONT THEATER, the new home of the Repertory Theater of Lincoln Center in New York, opened October 21 with Georg Büchner's drama, *Danton's Death.*

THEATER

In 1965 the American theater gave cause for dismay at the same time that it held out a pleasing promise for the future. The 1964–65 season in New York was among the most disappointing—in the number of plays produced, as well as in their quality—of the past quarter of a century, and the new season beginning in the fall of 1965 seemed even less fortunate. But if Broadway was sinking to an astonishing low, the theater as an institution in the United States was rising swiftly in public esteem. Fully professional companies throughout the country performed excellent living drama.

Broadway. As always, money was at the core of Broadway's troubles. Producers have been so burdened in recent years by rocketing costs that they have been forced to choose, for the most part, bland plays of wide popular appeal, but to set the prices of tickets far beyond the range of all but a small percentage of entertainment seekers. Throughout the year, as one insipid play after another opened in New York, persons concerned for the future of the arts were heard to observe that the theater and the movies had exchanged their traditional functions. For more than a generation, Hollywood had supplied the all-purpose variety of entertainment, which seldom raised a question relevant to the life of the intellectual community; suddenly Hollywood films had become a source of vivid, provocative drama. The Broadway theater, on the other hand, had so geared its productions to accord with the tastes of the average man, or at least the average man of means, that it could only seldom satisfy those persons searching for mental stimulation.

Yet the method of securing a hit by conceding everything to average tastes was by no means foolproof. For every such success as William Goodhart's *Generation,* starring Henry Fonda, or Bob Fisher and Arthur Marx's *The Impossible Years,* starring Alan King—two mild comedies of family problems—one could count half a dozen failures. The most striking of them was *Kelly,* a musical by Eddie Lawrence and Moose Charlap. Worried by unenthusiastic out-of-town notices for this somewhat offbeat work, the producers, headed by David Susskind, fretted for weeks on the road to turn *Kelly* into a standard, old-fashioned song-and-dance show. The result was a shattering failure which played on Broadway for one night only, and at a cost of $650,000.

As for box office prices, the second factor contributing to the loss of the Broadway audience to film theaters, the upward climb continued through the year. In the fall, a record top price of $11.90 was set for the musical *On a Clear Day You Can See Forever* by Alan Jay Lerner and Burton Lane, and a new high of $9.40 for a nonmusical play was established for John Whiting's *The Devils.* Unhappily, neither work offered the exemplary display of wit and taste necessary to sell out at such figures.

As these plays were preparing for their opening nights, John F. Wharton, a lawyer retained as consultant-director of the Legitimate Theater Industry Exploratory Commission, advanced a plan to more than double ticket prices. The commission had been established earlier in the year by the Broadway theater owners and producers to study the industry's financial problems and to improve its code of ethics. Wharton, in his widely publicized plan, recommended that the best seats be sold for $25 after the opening of a hit, but that a few seats at the back of the house be kept for last-minute sales at very low figures. To save the average play from rapid extinction, he recommended also that its tickets be sold at prices cut from week to week in accordance with demand. It remains to be seen whether producers will adopt the Wharton plan, which evidently is intended to prevent the sale of tickets at bootleg prices and to give ordinary citizens a chance to buy some seats, if not the best, at prices they can afford.

Distressing though the Broadway scene may have been in its banality and poor attendance, the year was not without a few notable productions. No new works by outstanding American playwrights were presented during 1965, but the year was kept from being a total loss artistically by some holdovers from the last weeks of 1964—two revivals of American plays, four or five foreign plays, and three new plays of merit by American writers. However, few of the

NANCY PALMER

DRAMATIC SENSATION of the 1965–66 Broadway season was a German import—Peter Weiss' *The Persecution and Assassination of Marat as Performed by the Inmates of the Asylum of Charenton Under the Direction of the Marquis de Sade.*

productions turned out to be financially successful.

Late in 1964 the Repertory Theater of Lincoln Center, which then was operating in its temporary home off Washington Square in Greenwich Village, added Arthur Miller's *Incident at Vichy* to a list of productions which also included his *After the Fall.* In *Incident at Vichy,* Miller placed the blame on every individual for the problems of man in general, as instanced in the plight of French Jews during World War II. The work received mixed notices, but it was substantial enough to attract large audiences.

Edward Albee offered in *Tiny Alice,* which opened on Broadway shortly before the end of 1964, a work which confused many by the vagueness of the religious allegory that it unfolded, and irked others with its sensational language and action. No other play of the 1964–65 season provoked quite so much comment. The performances by Sir John Gielgud as the lay secretary to a cardinal of the Catholic Church and of Irene Worth as Miss Alice, the richest woman on earth, were among the season's most outstanding.

In the opinion of many observers, the most refreshing play of 1965 was a 29-year-old comedy about an eccentric New York family: George S. Kaufman and Moss Hart's *You Can't Take It with You.* Originally scheduled by its producers for a limited engagement, it quickly became a sellout. Although Tennessee Williams had no new play to offer, an all-star revival of his *The Glass Menagerie* opened in the spring of 1965 for a good run.

A highlight of the year was the visit of the distinguished Moscow Art Theater, which had last played New York in 1924. For almost the entire month of February the company performed at the New York City Center in a repertory of four plays. As the stage's most famous exponents of the technique of acting developed by Konstantin Stanislavski and now popularly known as "the method," the company proved as fascinating to actors and directors as to the regular New York audience. Inevitably, the production of Chekhov's *The Three Sisters* was compared in the press to the production of the same play given in 1964 by the Actors Studio, and to the disadvantage of the New York organization.

The spring brought three new American plays of more than routine interest. James Baldwin's *The*

PICTORIAL PARADE

IRENE WORTH won a Tony award for the best female dramatic performance of the 1964–65 Broadway season. The Nebraska-born British actress played the role of Miss Alice—the richest woman on earth—in Edward Albee's *Tiny Alice.* Miss Worth's American appearances have been infrequent but notable. In 1950 she was acclaimed in T.S. Eliot's *The Cocktail Party* as Celia Coplestone, the role she had created the year before at the Edinburgh Festival. Later she played the title role in Schiller's *Maria Stuart* (1957), Albertine Prine in Lillian Hellman's *Toys in the Attic* (1960), and Goneril in *King Lear* (1964, on tour with the Royal Shakespeare Theatre).

Miss Worth was born on June 23, 1916. She graduated from UCLA and taught school briefly before turning to the stage. Although she has made her theatrical career in Britain, her debut was in New York as Fenella in *Escape Me Never* (1942). In 1959 she won the British Film Academy Award as best actress for her performance in the motion picture *Orders to Kill.*

BERT ANDREWS BEN KORNZWEIG HENRY GROSSMAN (ASMP)

ALSO ON BROADWAY: (left) *On a Clear Day You Can See Forever*—John Cullum and Barbara Harris; (center) *You Can't Take It with You*—l. to r., Donald Moffat, Richard Woods, Keene Curtis; (right) *Cactus Flower*—Barry Nelson and Lauren Bacall.

Amen Corner, in a production brought in from Los Angeles, proved disappointing but attracted interest. The study of the effort of a woman minister of a store-front church in Harlem to achieve peace of mind and self-respect, it differed markedly from Baldwin's *Blues for Mister Charlie*, a bitter play of race relations, produced in 1964. Neil Simon's *The Odd Couple* was not only a very funny play but an intelligent study of two men, both recently divorced, who set up housekeeping together, only to find that the traits which drove their spouses away now disrupt their new domesticity.

In a year of weak musicals, something could be said for *Flora, the Red Menace*, a brightly scored spoof of Communist activity in the United States in the 1930's. The show had a book by George Abbott and Robert Russell, and music by John Kander with lyrics by Fred Ebb. It starred Liza Minnelli, a capable young performer with touches of the quality of her famous mother, Judy Garland.

Among the many English imports of 1965 were Joe Orton's *Entertaining Mr. Sloane*, Peter Shaffer's *The Royal Hunt of the Sun*. John Whiting's *The Devils*, Michael Dyne's *The Right Honourable Gentleman*, and John Osborne's *Inadmissible Evidence*—all presented in the fall to mixed reviews. More popular than any of them was the English musical *Half a Sixpence*, starring the young, engaging Tommy Steele.

It was, however, a German play—as produced by an English company—that drew highest praise of the imports: Peter Weiss's explicitly titled *The Persecution and Assassination of Marat as Performed by the Inmates of the Asylum of Charenton Under the Direction of the Marquis de Sade*. The play's theme, that revolutions inevitably disintegrate, was not new, but the breathtaking expertness of Peter Brook's direction and the performances by the Royal Shakespeare Company made the very most of Weiss' Brechtian style.

But of all the events on Broadway, the most important occurred some 15 blocks north of the theater district, at Lincoln Center for the Performing Arts. In January the news broke that Elia Kazan and Robert Whitehead were to be replaced as directors of the center's Repertory Theater by Herbert Blau and Jules Irving, founders (in 1952) of the San Francisco Actor's Workshop. In the spring the new direc-

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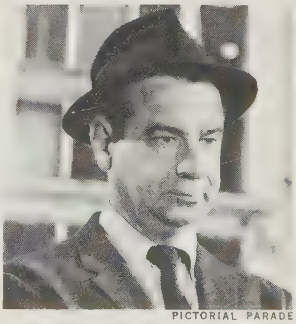
WALTER MATTHAU won a Tony award in 1965 for his first Broadway starring role, the loutish sportswriter, Oscar, in Neil Simon's comedy *The Odd Couple*. Matthau had played a variety of smaller parts in 20 Broadway plays and had appeared often in films and on television. Theatergoers saw him portray a playwright in *Will Success Spoil Rock Hunter?* (1955), a concert impresario in *Once More, with Feeling* (1958), and a French aristocrat in *A Shot in the Dark* (1961). He received his first Tony in 1962—as best supporting actor—for his role in *A Shot in the Dark*.

Matthau was born in New York City on Oct. 1, 1920. His acting career began with bit parts in Yiddish plays. After graduation from high school and three years in the Army, he studied acting at the New School Dramatic Workshop. In 1948 he got his "first real job on Broadway"—as a candelabrum carrier in *Anne of the Thousand Days*. Then followed a small part in *The Liar* and the succession of character roles that established his name in the theater.



PICTORIAL PARADE

THE BROADWAY THEATER IN 1965

BROADWAY OPENINGS

All in Good Time, a play by Bill Naughton; directed by Donald McWhinnie; with Donald Wolfit; February 18–March 27.

The Amen Corner, a play by James Baldwin; directed by Frank Silvera; with Bea Richards and Frank Silvera; April 15–June 26.

And Things That Go Bump in the Night, a play by Terrence McNally; directed by Michael Cacoyannis; with Eileen Heckart; April 26–May 1.

Anya, a musical with book by George Abbott and Guy Bolton based on *Anastasia,* a play by Marcelle Maurette and Mr. Bolton; music and lyrics by Robert Wright and George Forrest, based on themes by Rachmaninoff; directed by Mr. Abbott; with Lillian Gish and Irra Petina; November 29–December 11.

Baker Street, a musical based on adventures of Sherlock Holmes, with book by Jerome Coopersmith adapted from stories by Sir Arthur Conan Doyle; music and lyrics by Marian Grudeff and Raymond Jessel; directed by Harold Prince; with Fritz Weaver and Inga Swenson; February 16–November 14.

Boeing-Boeing, a comedy by Marc Camoletti, adapted by Beverley Cross; directed by Jack Minster; with Ian Carmichael; February 2–20.

Cactus Flower, a comedy by Abe Burrows, based on a play by Pierre Barillet and Jean-Pierre Gredy; directed by Mr. Burrows; with Lauren Bacall, Barry Nelson; December 8–.

Catch Me If You Can, a comedy by Jack Weinstock and Willie Gilbert, based on the play *Piège pour un homme seul* by Robert Thomas; directed by Vincent J. Donehue; with Dan Dailey, Tom Bosley, and Bethel Leslie; March 9–June 5.

The Devils, a play by John Whiting based on *The Devils of Loudun* by Aldous Huxley; directed by Michael Cacoyannis; with Jason Robards and Anne Bancroft; November 16–.

Diamond Orchid, a play by Jerome Lawrence and Robert E. Lee; directed by José Quintero; with Jennifer West, Bruce Gordon, and Finlay Currie; February 10–13.

Do I Hear a Waltz?, a musical with book by Arthur Laurents, based on his play *The Time of the Cuckoo;* music by Richard Rodgers and lyrics by Stephen Sondheim; directed by John Dexter; with Elizabeth Allen, Sergio Franchi, Carol Bruce, and Madeleine Sherwood; March 18–September 25.

Drat! the Cat!, a musical with book by Ira Levin; music by Milton Schafer and lyrics by Mr. Levin; directed by Joe Layton; with Elliott Gould and Lesley Ann Warren; October 10–16.

Entertaining Mr. Sloane, a comedy by Joe Orton; directed by Alan Schneider; with Sheila Hancock and Dudley Sutton; October 12–23.

Fade Out—Fade In, a musical with book and lyrics by Betty Comden and Adolph Green and music by Jule Styne; directed by George Abbott; with Carol Burnett, Dick Shawn, and Lou Jacobi; February 15–April 17 (return).

The Family Way, a play by Ben Starr; directed by Michael Gordon; with Collin Wilcox; January 13–16.

Flora, the Red Menace, a musical with book by George Abbott and Robert Russell, based on the novel *Love Is Just Around the Corner* by Lester Atwell; music by John Kander and lyrics by Fred Ebb; directed by Mr. Abbott; with Liza Minnelli and Bob Dishy; May 11–July 31.

Generation, a comedy by William Goodhart; directed by Gene Saks; with Henry Fonda; October 6–.

The Glass Menagerie, a revival of the play by Tennessee Williams; directed by George Keathley; with Maureen Stapleton, George Grizzard, Piper Laurie, and Pat Hingle; May 4–October 2.

La Grosse Valise, a musical with book by Robert Dhéry; music by Gerard Calvi and lyrics by Harold Rome; directed by Mr. Dhéry; with Victor Spinetti; December 14–18.

Half a Sixpence, a musical with book by Beverley Cross, based on the novel *Kipps* by H.G. Wells; music and lyrics by David Heneker; directed by Gene Saks; with Tommy Steele; April 25–.

The Impossible Years, a comedy by Bob Fisher and Arthur Marx; directed by Arthur Storch; with Alan King, Terrence Logan, and Jane Elliot; October 13–.

Inadmissible Evidence, a play by John Osborne; directed by Anthony Page; with Nicol Williamson; November 30–.

Kelly, a musical with book and lyrics by Eddie Lawrence and music by Moose Charlap; directed by Herbert Ross; with Don Francks, Anita Gillette and Wilfrid Brambell; February 6 (one performance).

Man of La Mancha, a musical with book by Dale Wasserman suggested by the life and works of Cervantes; music by Mitch Leigh and lyrics by Joe Darion; directed by Albert Marre; with Richard Kiley, Joan Diener, Ray Middleton, and Robert Rounseville; November 22–.

Mating Dance, a comedy by Eleanor Harris Howard and Helen McAvity; directed by Ronny Graham; with Van Johnson, Marian Winters, and J.D. Cannon; November 3 (one performance).

Maurice Chevalier at 77, a one-man show; April 1–May 1 (limited engagement).

Me and Thee, a comedy by Charles Horine; directed by Perry Bruskin; with Durward Kirby and Barbara Britton; December 7 (one performance).

Minor Miracle, a play by Al Morgan; directed by Howard Erskine; with Lee Tracy, Pert Kelton, and Dennis King; October 7–9.

Moscow Art Theater in *Dead Souls,* a comedy by Mikhail Bulgakov adapted from the novel by Gogol, Konstantin Stanislavski's production directed by V.G. Sakhnovski, E.S. Teleshava, and Gregori Konski; *The Cherry Orchard* by Anton Chekhov, directed by Victor Stanitsyn; *The Three Sisters* by Anton Chekhov, original staging by Vladimir Nemirovich-Danchenko, restaged by Iosif Rayevski; and *Kremlin Chimes* by Nicolai Pogodin, directed by Vladimir Nemirovich-Danchencko, Leonid Leonidov, M.O. Knebel, Iosif Rayevski, and Vassili Markov; February 4–28 (limited engagement).

Mrs. Dally, a play by William Hanley; directed by Joseph Anthony; with Arlene Francis and Ralph Meeker; September 22–November 6.

Music Theater of Lincoln Center in revivals of *Kismet* (June 22–July 31) and *Carousel* (August 10–September 18); limited engagements.

New York City Center Light Opera Company in revivals of *Guys and Dolls* (April 28–May 9), *Kiss Me, Kate* (May 12–30), *South Pacific* (June 2–13), and *The Music Man* (June 16–27); limited engagements.

The Odd Couple, a comedy by Neil Simon; directed by Mike Nichols; with Walter Matthau and Art Carney; March 10–.

Oliver!, a musical based on Dickens novel *Oliver Twist;* with book, music, and lyrics by Lionel Bart; with Robin Ramsay, Maura K. Wedge, and Victor Stiles; August 2–September 25 (return).

On a Clear Day You Can See Forever, a musical with book by Alan Jay Lerner; music by Burton Lane and lyrics by Mr. Lerner; directed by Robert Lewis; with Barbara Harris and John Cullum; October 17–.

The Persecution and Assassination of Marat as Performed by the Inmates of the Asylum of Charenton Under the Direction of the Marquis de Sade, a play by Peter Weiss; English version by Geoffrey Skelton; verse adaptation by Adrian Mitchell; directed by Peter Brook; with members of the Royal Shakespeare Company, December 27–.

Peterpat, a comedy by Enid Rudd; directed by Joe Layton; with Dick Shawn and Joan Hackett; January 6–23.

Pickwick, a musical with book by Wolf Mankowitz based on *The Pickwick Papers* by Charles Dickens; music by Cyril Ornadel and lyrics by Leslie Bricusse; directed by Peter Coe; with Harry Secombe, Charlotte Rae, and Roy Castle; October 4–November 20.

The Playroom, a play by Mary Drayton; directed by Joseph Anthony; with Peter Kastner, Karen Black; December 5–.

Polish Mime Theater in a program of eight pantomimes by Henryk Tomaszewski; directed by Mr. Tomaszewski; January 5–17 (limited engagement).

Postmark Zero, a play by Robert Nemiroff, based on Burton C. D'Lugoff's *Letters from Stalingrad;* directed by Peter Kass; with Hardy Kruger and Viveca Lindfors; November 1–6.

A Race of Hairy Men!, a comedy by Evan Hunter; directed by Elaine Perry; with Brandon de Wilde; April 29–May 1.

Repertory Theater of Lincoln Center in *Tartuffe* by Molière, translated by Richard Wilbur and directed by William Ball (January 14–May 22); *Danton's Death* by George Büchner, directed by Herbert Blau (October 21–November 28); and *The Country Wife* by William Wycherley, directed by Robert Symonds (December 9–).

The Right Honourable Gentleman, a play by Michael Dyne; directed by Frith Banbury; with Charles D. Gray, Sarah Badel, and Coral Browne; October 19–.

The Roar of the Greasepaint—the Smell of the Crowd, a musical with book, music, and lyrics by Anthony Newley and Leslie Bricusse; directed by Mr. Newley; with Anthony Newley and Cyril Ritchard; May 16–December 4.

The Royal Hunt of the Sun, a play by Peter Shaffer, directed by John Dexter; with Christopher Plummer, George Rose, and David Carradine; October 26–.

Skyscraper, a musical with book by Peter Stone, based on the play *Dream Girl* by Elmer Rice; directed by Cy Feuer; music by James Van Heusen and lyrics by Sammy Cahn; with Julie Harris, Charles Nelson Reilly, and Peter L. Marshall; November 13–.

A Very Rich Woman, a comedy by Ruth Gordon, based on a play by Philippe Heriat; directed by Garson Kanin; with Ruth Gordon, Madge Kennedy, Ethel Griffies, and Raymond Walburn; September 30–October 23.

The World of Charles Aznavour, a program by Mr. Aznavour of his own songs; October 14–30 (limited engagement).

Xmas in Las Vegas, a play by Jack Richardson; directed by Fred Coe; with Tom Ewell, Shannon Bolin, Heywood Hale Broun, and Judy Frank; November 4–6.

The Yearling, a musical with book by Herbert Martin and Lore Noto, based on the novel by Marjorie Kinnan Rawlings; music by Michael Leonard and lyrics by Mr. Martin; directed by Lloyd Richards; with David Wayne, Dolores Wilson, and Steve Sanders; December 10–11.

You Can't Take It with You, a revival of the comedy by George S. Kaufman and Moss Hart; directed by Ellis Rabb; with Rosemary Harris, Donald Moffat, and Clayton Corzatte; November 23–.

The Zulu and the Zayda, a play with music; book by Howard Da Silva and Felix Leon, based on the story by Dan Jacobson; music and lyrics by Harold Rome; directed by Dore Schary; with Menasha Skulnik and Ossie Davis; November 10–.

BROADWAY HOLDOVERS FROM PREVIOUS YEARS

Any Wednesday (opened Feb. 18, 1964)
Barefoot in the Park (Oct. 23, 1963)
Fiddler on the Roof (Sept. 22, 1964)
Funny Girl (March 26, 1964)
Golden Boy (Oct. 20, 1964)
Hello, Dolly! (Jan. 16, 1964)
Luv (Nov. 11, 1964)
The Subject Was Roses (May 25, 1964)

tors announced a program of four plays for the first season: Georg Büchner's *Danton's Death,* William Wycherley's *The Country Wife,* Bertolt Brecht's *The Caucasian Chalk Circle,* and Jean-Paul Sartre's *The Condemned of Altona.* On October 21 the company opened in its permanent home, the superbly equipped Vivian Beaumont Theater, in Büchner's tragedy of the French Revolution. Reviews were unfavorable; the acting of almost the entire company, many members of which had come from the Actor's Workshop, was below Broadway standards, and the director, Blau, had made excessive use of the theater's moving stages. *The Country Wife,* which followed in December, was equally graceless. But audiences hoped that Blau and Irving would be given a fair chance to prove themselves.

Off Broadway. Like Broadway itself, off-Broadway suffered a decline in 1965. Among the few notable representations were Leroi Jones' *The Toilet* and *The Slave* (a double bill which opened late in 1964), a revival of Miller's *A View from the Bridge,* Bertolt Brecht's *Baal,* Donald Hall's *An Evening's Frost,* and William Alfred's *Hogan's Goat.* The pieces by Jones, a Negro writer, were shockingly outspoken commentaries on the Negro's place in American life. *An Evening's Frost,* conceived and directed by Marcella Cisney, evoked the life story of the late Robert Frost from his verse, letters, and conversations with friends. *Hogan's Goat,* a melodrama of Brooklyn politics in 1890, was one of perhaps six commendable plays on view in the city at the year's end.

Summer and Community Theater. Shakespeare is now the chief summer theatrical commodity. Traveling from coast to coast, one may see all his great plays and many of his minor ones. In the three major Shakespeare festivals in North America, the most admired productions were *Coriolanus* (Central Park, New York), *Henry IV,* Part II (Stratford, Ont.), and *King Lear* (Stratford, Conn.).

It was community theater which brought the year's most encouraging news. In 1965, 24 American cities other than New York had professional resident companies that were recognized by Equity (the actors' union) and had good attendance records. Around the country it was possible to see, among many plays of great value, Goldsmith's *She Stoops to Conquer* in Cincinnati, Shaw's *Major Barbara* in Princeton, Brecht's *Edward II* in San Francisco, Wilder's *The Skin of Our Teeth* in Washington, O'Neill's *Long Day's Journey into Night* in St. Paul, Chekhov's *The Cherry Orchard* in Seattle, and Molière's *The Miser* in Minneapolis.

THE ODD COUPLE, by Neil Simon, was the hit comedy of Broadway in 1965. It starred Art Carney (l.) and Walter Matthau (r). Matthau won Tony Award for his performance.

FRIEDMAN-ABELES

It has been no easy matter for these regional theaters to develop audiences, but there is evidence that local interest is increasing, because established repertory groups have been able to continue. The waning respect for touring companies is in part attributable to the new theaters' excellence. The establishment of the American Playwrights Theater to provide good new plays for them is yet another sign of their importance. This organization offered its first script in 1965: Robert Anderson's *The Days Between.* After a production in Dallas in June, it became available to some 50 theaters.

Awards. Frank D. Gilroy's first Broadway play, *The Subject Was Roses,* won the top three dramatic awards of 1965. Named best play of the 1964–65 season by the New York Drama Critics Circle (April 27), it won its author the Pulitzer Prize for drama (May 3) and received the American Theater Wing's Antoinette Perry ("Tony") Award as best play of 1964–65 (June 13). The Tony award to *Fiddler on the Roof* as best musical also confirmed the choice of the drama critics. Both plays were running at the end of 1965.

Tony awards for performances in nonmusical plays went to Walter Matthau (*The Odd Couple*) and Irene Worth (*Tiny Alice*). For leading roles in musicals, the award winners were Zero Mostel (*Fiddler on the Roof*) and Liza Minnelli (*Flora, the Red Menace*). (See also PRIZES AND AWARDS.)

Theater Abroad. Productions in the European capitals were varied and numerous in 1965. Paris, fortunate in having its perennial Théâtre des Nations, enjoyed visits by troupes from most of Europe, including even Rumania, which offered a production of the Rumanian-born Eugène Ionesco's *Rhinoceros.* From Italy came Anna Magnani in Giovanni Verga's *The She-Wolf.* Other stimulating plays of the year were Jean-Louis Barrault's adaptation of Kafka's *Amerika,* and a very broadly directed version of Shakespeare's *A Midsummer Night's Dream* at the Comédie Française.

In Berlin the Freie Volksbühne gained ground, under Erwin Piscator, as the West's answer to the more famous Berliner Ensemble of East Berlin. Piscator's latest find among playwrights was Heinar Kipphardt, whose *In the Affair of J. Robert Oppenheimer* highlighted the season. In the fall, Piscator's theater and 13 others in West and East Germany staged simultaneous openings of Peter Weiss' *The Investigation,* which is about the recent war crimes trials of Nazi officials.

London audiences enjoyed, among much other fare, a visit of the Berliner Ensemble in four productions of works by Brecht. Two new plays by John Osborne, *A Patriot for Me* and *Inadmissible Evidence,* played to crowded houses. In its London theater, the Royal Shakespeare company offered, among other plays, Harold Pinter's *The Homecoming* and Brecht's *Puntila.* At Stratford the season's novelty was Christopher Marlowe's *The Jew of Malta.* Eric Porter, who took the title part, also played Shylock in *The Merchant of Venice.* In Chichester the National Theatre delighted audiences with another, and far gentler, novelty: Arthur Wing Pinero's 19th century sentimental comedy of actors and actresses, *Trelawny of the Wells.*

MALCOLM GOLDSTEIN
Associate Professor of English
Queens College of the City University of New York

TIBET. See CHINA.

TIN. See MINING—*Mineral Production.*

TOBACCO

World production of tobacco (excluding Communist China) declined from 10,042,629,000 pounds in 1964 to an estimated 9,781,285,000 pounds in 1965, according to the Foreign Agricultural Service of the U.S. Department of Agriculture.

U.S. tobacco output declined 14%, from 2,227,347,000 pounds in 1964 to 1,913,206,000 in 1965. Most of the reduction resulted from a 9% drop in plantings in response to tighter acreage controls.

Canada's production increased to 177,000,000 pounds, up 15% from the 153,711,000 pounds harvested in 1964. Larger harvests of flue-cured and cigar tobaccos more than offset the sharp drop in burley and slight declines in other tobaccos.

Among the principal tobacco-producing countries, Brazil, India, and Pakistan harvested larger crops, while production declined in the USSR, Japan, the Philippines, Rhodesia, Turkey, and Greece.

The 1965 European harvest of 1,478,548,000 pounds was 5% less than in 1964, but 29% above the 1955–59 annual average of 1,142,000,000 pounds.

TOBACCO PRODUCTION IN MAJOR COUNTRIES

(In pounds)

Country	Average, 1955–59	Preliminary, 1964	Preliminary, 1965
Brazil	306,009,000	302,409,000	420,859,000
Canada	165,770,000	153,711,000	177,000,000
China, Communist	1,687,600,000	...	...
France	120,416,000	95,813,000	98,016,000
Greece	199,945,000	298,894,000	254,161,000
India	596,366,000	784,870,000	790,000,000
Indonesia	153,267,000	169,975,000	184,305,000
Italy	168,220,000	173,912,000	173,500,000
Japan	315,506,000	467,746,000	448,746,000
Pakistan	238,568,000	228,400,000	242,100,000
Philippines	95,277,000	169,754,000	155,424,000
Rhodesia	150,310,000	304,085,000	239,794,000
Turkey	261,081,000	386,249,000	264,000,000
USSR	438,715,000	509,263,000	427,692,000
U.S.	1,913,757,000	2,227,347,000	1,913,206,000
World total	8,519,109,000	10,257,437,000	9,858,485,000

U.S. exports of unmanufactured tobacco in 1965 totaled about 470,000,000 pounds (equivalent to about 530,000,000 pounds at farm-sales weight), or about 9% less than in 1964.

Cigarettes produced in the United States in 1965 numbered a record 561,000,000,000, or about 4% more than in 1964, and 2% more than the previous record of 550,600,000,000 in 1963. The average number of cigarettes smoked per person 18 years and over in 1965 was estimated at 4,300, or 3% above 1964 and slightly below the 1963 record.

The 1965 consumption of cigars and cigarillos by U.S. smokers was about 8,800,000,000—3% below the record 1964 level, but 21% above that of 1963.

RAY REIMAN
President, Farm Business, Inc.

TOBAGO. See TRINIDAD AND TOBAGO.

TOGO

The National Assembly of Togo approved the country's first five-year development plan (1966–70) on July 19, 1965. The plan, initiated on Jan. 1, 1966, provides for a total private and public investment of $114.3 million. A major portion of the expenditures is earmarked for communications, transportation, housing, and investment. The plan, which envisions a gross growth rate of 30% over the five-year period, is under the supervision of a High Commission for the Development Plan, which was created by the Council of Ministers.

TOGO · Information Highlights

ASIA
S. AMERICA
AFRICA

Area: 21,853 square miles.
Population: 1,642,000 (July 1, 1965 est.).
Chief City (1962 est.): Lomé, the capital, 80,000.
Government: *President*—Nicolas Grunitzky (took office May 5, 1963); *Vice President*—Antoine Meatchi (took office May 5, 1963). *Parliament*—National Assembly, 52 members; party seating: Togolese Popular Movement, Juvento; Democratic Union of Togolese Peoples, and Togolese Unity Party, 13 seats each.
Religious Faiths: Tribal religions, 70% of population; Roman Catholics, 16%; Muslims, 5%; others, 9%.
Education: *Total school enrollment* (1962–63)—134,486 (primary, 126,881; secondary, 6,880; technical, 725).
Finance (1965 budget): *Revenues*, $17,700,000; *expenditures*, $20,100,000; *monetary unit*, CFA franc (246.85 francs equal U.S.$1).
Gross National Product (1962): $107,000,000.
Crops (metric tons): Cassava (1963–64), 1,088,000 (ranks 7th among world producers); cocoa beans (1964–65), 15,000 (world rank, 11th); palm kernels (1963–64), 10,400 (world rank, 13th); green coffee (1964–65), 12,000; peanuts (1962–63), 10,000; cottonseed (1964–65), 3,000.
Chief Mineral (metric tons exported, 1964): Phosphate rock, 778,000.
Foreign Trade (1964): *Exports*, $30,200,000 (chief exports: coffee, $10,200,000; phosphates, $7,900,000; cacao, $6,600,000; palm nuts, $1,800,000); *imports*, $41,600,000 (chief imports, 1963: woven cotton fabrics, $4,700,000; nonelectrical machinery, $1,800,000; iron and steel, $1,700,000). *Chief trading partners* (1963): France (took 52% of exports, supplied 33% of imports); Japan (took 3% of exports, supplied 9% of imports); Britain (took 2% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 2,933 miles (137 paved); *motor vehicles* (1964), 3,500 (automobiles, 2,500); *railways* (1963), 274 miles; *civil airline*, Air Afrique; *principal airport*, Lomé.
Communications: *Telephones* (1964), 2,610; *radios* (1961), 6,300; *newspapers* (1963), 2 (daily circulation, 14,000).

Foreign Affairs. The Togo-Ghana frontier, which had been closed since 1961, was reopened on July 27. The reopening, initially scheduled for January, was postponed when a Togolese frontier guard was slain by an intruding Ghanaian border policeman near Segbé, Togo, on January 16.

Dahomey's prime minister, Justin Ahomadegbé, visited Lomé, Togo, on March 17. The two governments agreed to create a joint Togolese-Dahomean commission to study cooperation in economic and social areas.

On July 24, Togo and the Soviet Union signed an agreement to increase the number of scholarships for Togolese students to study in the USSR.

On August 27 the United States and Togo signed a treaty of friendship and economic cooperation.

Military Affairs. On January 19, President Nicolas Grunitzky removed Major Emmanuel Bodjolle as chief of staff of the Togolese army and replaced him with Major Etoime Eyadema, who had assassinated former President Sylvanus Olympio in the coup d'état on Jan. 13, 1963.

Economic Developments. On July 15 the National Assembly enacted Togo's first law aimed at the promotion of foreign investment. The law provides various tax, customs, and labor and market benefits to investors, based on the type and amount of investment. The government particularly hoped to attract investments for light industry and processing of agricultural products.

The U.S.-sponsored Togolese National Rural Development Training Center at Tchitchao was inaugurated on January 9 by President Nicolas Grunitzky. The center is designed to instruct agricultural extension agents in various aspects of rural and civic development.

Public Health. A U.S.-sponsored measles immunization program was launched in Togo in January.

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TONGA. See Commonwealth of Nations.

TORONTO

Toronto, the capital of Ontario and Canada's second largest city (est. 1965 pop.: city, 648,474; metropolitan area, 1,741,411), studied a report in 1965 recommending a revision of its metropolitan government. A new city hall was opened during the year, as were new educational institutions at the University of Toronto and York University.

Government. In 1965 the provincial royal commissioner, Carl Goldenberg, presented a report on the revision of Toronto's metropolitan government. His recommendations included: a four-city borough system to replace the present 13 governments; a separately elected metropolitan council; three-year terms for all elected officials; and uniform tax assessments and payments. The provincial government was expected to act on the report in the near future.

Toronto presently has a dual system of government, with responsibilities being divided between the Municipality of Metropolitan Toronto and the local governments of the city proper and the 12 suburbs. The metropolitan government council of 24 representatives is composed of the heads of councils from each of the 12 suburban municipalities and, from the city proper, the mayor (Philip G. Givens since 1963), two controllers, and nine aldermen. The council selects a chairman (William R. Allan since 1962) from outside its membership.

The Metropolitan Corporation is responsible for issuing debentures and for determining what local permanent financing should be done by the 13 municipalities. Except for the Metropolitan Police Commission, most metropolitan departments share functions with or duplicate those of corresponding local departments.

The general assessment value of metropolitan Toronto in 1965 was $4,582,643,643.

New City Hall. Toronto's new $30,000,000 city hall, designed by Viljo Revell, opened on Sept. 13, 1965. An adjacent court house is under construction, and the city plans to expropriate the area south of City Hall Square, which will be leased to a private developer on a 95-year basis.

Other Construction. Building construction in Toronto in 1965 was valued at $167,667,617. Future projects include an $85,000,000 downtown waterfront development.

New Educational Facilities. In 1965 the University of Toronto opened its suburban Scarborough College in temporary quarters in Toronto proper, and York University began operations at its new campus in the city. The provincial government announced that a 180-acre, $14,000,000 science center and museum would be built in the Don Valley as its project for the Centennial of Canadian Confederation in 1967.

Transportation. Public transportation in the metropolitan area is provided by the Toronto Transit Commission, which operates surface, underground, and ferry services. These services averaged 900,000 revenue passengers per day in 1965.

Completion of the Bloor-Danforth subway was scheduled for February 1966, and plans were begun for the northward extension of the Yonge subway.

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TOURISM. See Travel.

TRACK AND FIELD. See Sports.

TRADE. See Federal Trade Commission; International Trade.

TRAVEL

Despite the inroads made by airlines into the formerly ship-dominated market, and although lower fares meant a sizable increase in air travel into and out of the United States, the steamship industry staged a remarkable comeback in 1965 from its decline of preceding years. Six mighty cruise and transatlantic liners made their debuts, evidencing confidence by maritime management that the traveling public would continue to seek the pleasures of travel by sea, and particularly of cruises. The new ships—*Oceanic, Michelangelo, Raffaello, Sagafjord, Queen Anna Maria,* and *Europa*—were equipped so completely as to make them seaborne resort hotels. But none was American, and indeed, events within the U.S. maritime industry pointed darkly to the decline and eventual elimination of American vessels from the international passenger trade.

LUXURY LINERS AND FREIGHTERS stand at New York piers, ready to take more than 12,000 passengers on warm-weather cruises over the Christmas and New Year's holidays.

UPI

THE *YARMOUTH CASTLE,* a cruise ship en route from Miami to the Bahamas, burned to the waterline in the predawn hours of Nov. 13, 1965. Ninety persons lost their lives in this, one of the worst maritime disasters in the history of U.S. shipping.

WIDE WORLD

U.S. Shipping Activities. During the year the U.S. Lines' *America* was sold abroad, and a long and bitter strike cost the shipping industry more than $100 million. (See LABOR.) A special presidential study group recommended the phasing out of the U.S. passenger ship over the next decade. (See SHIPPING.)

Lying within this controversial area, too, was legislation, not yet signed into law by the end of 1965, to bring stricter regulation of cruise activities from U.S. ports. This legislation was intended to prevent the recurrence of circumstances of the previous year in which thousands of cruise passengers had been left stranded by the sudden bankruptcy of unregulated cruise companies using foreign flag carriers.

Involved more tragically was the cruise ship *Yarmouth Castle,* owned by an American company but registered in Panama. It burned and sank on November 13 as it was en route from Miami, Fla., to the Bahamas, with the loss of 90 lives—the worst maritime disaster involving a U.S. vessel since the Ward liner *Morro Castle* burned to the waterline on Sept. 8, 1934.

Air Travel. On the other hand, international and U.S. domestic airlines did record business and had record profits in 1965, notwithstanding or perhaps because of the introduction of lower fares on most routes. Subsonic jet aircraft rapidly deposed piston equipment from major routes and there was talk about supersonic aircraft coming into service in the mid-1970's.

There were signs at year's end that air fares would drop further in 1966 and that the reduction, in combination with the magnificent opportunities for travel abroad presented by the new ocean liners, would take yet another record number of Americans to foreign shores. (See AERONAUTICS.)

Government Action. One aspect of the record travel business displeased the U.S. government—the continued decline in its gold reserves, reflecting among other things an imbalance in the tourism account between the United States and other countries. Of efforts made to redress the situation, two were significant: further restriction of the rights of U.S. citizens to make duty-free purchases abroad; and the formation of a special presidential, cabinet-level committee on tourism development, headed by Vice President Humphrey.

On June 30, Congress passed and President Johnson signed a bill reducing the amount of duty-free goods an American tourist could bring into the United States. Whereas before, the value of such goods could not exceed $100 wholesale, it now cannot exceed $100 retail. Duty-free importation of liquor was reduced from one gallon to one quart. Tourists returning from the U.S. possessions of Guam, American Samoa, and the Virgin Islands will be allowed to bring in $200 in duty-free goods at the retail value, and a gallon of liquor.

EXPENDITURES OF U.S. TOURISTS ABROAD

Area	1962	1963	1964
Canada	$ 479,000,000	$ 522,000,000	$ 550,000,000
Mexico	395,000,000	448,000,000	480,000,000
Europe and Mediterranean	660,000,000	735,000,000	815,000,000
West Indies and Central America	178,000,000	180,000,000	190,000,000
South America	55,000,000	56,000,000	57,000,000
Other	125,000,000	129,000,000	124,000,000
Total	$1,892,000,000	$2,070,000,000	$2,216,000,000

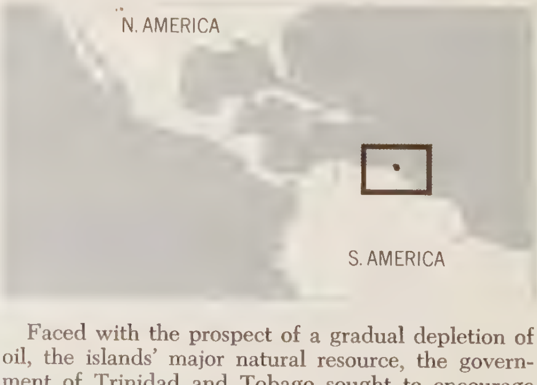
Source: *1965 Statistical Abstract of the United States.*

Far more constructively, the Humphrey committee was instrumental in setting up the "Discover America" program, a wholly private enterprise designed to develop Americans' interest in seeing their own land, to facilitate the growth of tourist services and attractions in the United States, and to organize a tourism industry of the caliber of those in other parts of the world.

EWEN C. GILLIES
Managing Editor, "Travel Trade" Magazine

TREASURY DEPARTMENT, U.S. See BUDGET, U.S.; COIN COLLECTING; MONEY.

TRINIDAD AND TOBAGO



Faced with the prospect of a gradual depletion of oil, the islands' major natural resource, the government of Trinidad and Tobago sought to encourage diversification of industry in 1965. Many manufacturing plants were established, and the petroleum industry went ahead with plans for expansion of its facilities and diversification of its products.

Industry. As part of its efforts to encourage industrial development, the government in April

— TRINIDAD AND TOBAGO · Information Highlights —

Area: 1,980 square miles.
Population: 949,000 (June 30, 1964 est.).
Chief Cities (1960 census): Port of Spain, the capital, 93,954; San Fernando, 39,830; Arima, 10,982; Siparia, 4,445.
Government: *Governor General*—Sir Solomon Hochoy; *Prime Minister*—Dr. Eric E. Williams. *Parliament*—Senate, 24 members (appointed by the governor general on the advice of the prime minister and the leader of the opposition); House of Representatives, 30 members; party seating (1965): People's National Movement, 17; Democratic Labor party, 6; Liberal party, 3; Independent, 1; vacant, 3.
Religious Faiths: Roman Catholics, 36% of population; Hindus, 23%; Anglicans, 21%; others, 20%.
Education: *Literacy rate*—80% of population aged 10 and over. *Total school enrollment* (1963)—237,813 (primary and secondary).
Finance (1963): *Revenues,* $136,000,000; *expenditures,* $134,000,000; *public debt,* $92,000,000; *monetary unit,* West Indian dollar (1.714 dollars equal U.S.$1).
Gross National Product (1963): $580,000,000.
National Income (1963): $466,700,000; average annual income per person, $507.
Economic Index: *Cost of living* (1964), 114 (1958=100).
Manufacturing (metric tons, 1963): Gasoline, 2,262,000; sugar (1964), 249,000; cement (1964), 176,000; beer, 7,750; tobacco, 10.
Crops (metric tons, 1964–65 crop year): Citrus fruits, 30,000; cocoa beans, 4,500; coffee, 4,500.
Minerals (metric tons, 1963): Natural gas (1964), 42,114,000,000 cubic feet (ranks 17th among world producers); crude petroleum (1964), 49,724,000 barrels; limestone, 810,790; sand and gravel, 748,809; natural asphalt, 171,540; clays, 78,221; sulfur, 7,100.
Foreign Trade (1964): *Exports,* $405,000,000 (chief exports, 1963: petroleum products, $286,000,000; sugar, $29,000,000; crude petroleum, $22,000,000; cocoa, $5,000,000); *imports,* $426,000,000 (chief imports, 1963: crude petroleum, $173,000,000; nonelectrical machinery, $24,000,000; iron and steel, $14,000,000). *Chief trading partners* (1963): U.S. (took 51% of exports, supplied 16% of imports); Britain (took 43% of exports, supplied 20% of imports); Venezuela (took 0.4% of exports, supplied 19% of imports).
Transportation: *Roads* (1964), 4,000 miles (2,700 paved); *motor vehicles* (1964), 57,681 (automobiles, 46,092); *government railways* (1963), 109 miles; *civil airlines,* British West Indian Airways; *principal airport,* Port of Spain.
Communications: *Telephones* (1964): 35,060; *television station* (1964), 1; *television sets* (1964), 20,000; *radios* (1964), 163,500; *newspapers* (1963), 2 (daily circulation, 77,000).

passed a law requiring that labor disputes come before a special court before a strike may be called. Protective tariffs also were used to encourage new industries. The islands' first automobile assembly plant, a shoe factory, and a flour mill were among the 34 industrial projects under construction in 1965.

In spite of dwindling local oil supplies, the petroleum industry expanded refinery facilities and planned new petrochemical plants. Plans were made to use more natural gas and imported crude oil to manufacture refined petroleum and petrochemical products. Industry leaders and government officials met in Port of Spain in January to discuss the trend toward diversification.

Agriculture. Sugar production in the islands increased in 1965 to an estimated 280,000 tons. Economists expressed concern over lack of diversification in agriculture which necessitates large food imports, a factor in the nation's chronic trade deficits. The economists also warned against the dangers of an economy too dependent on fluctuating world sugar prices.

Standard of Living. The per capita income in the islands was expected to reach $680 in 1965, maintaining a standard of living in Latin America second only to that of Venezuela. Unemployment, however, averaged about 14% of the work force of 350,000. A rapidly expanding population has been adding about 10,000 new workers to the labor force annually.

Grenada Merger Plan. In June 1965, advocates of an eventual merger between Trinidad and Tobago and the island of Grenada lost an ally. Eric M. Gairy, leader of Grenada's opposition United Labour party and a former advocate of the union, came out against the proposed merger. Gairy said that popular opinion in the islands was too firmly opposed to the merger to make the plan practical.

TRUCIAL OMAN. See ARABIA.

TRUCK TRANSPORTATION. See MOTOR TRANSPORTATION.

TRUST TERRITORY OF THE PACIFIC ISLANDS. See PACIFIC ISLANDS.

TUNGSTEN. See MINING—*Mineral Production.*

TUNISIA

EUROPE
ASIA
AFRICA

President Habib Bourguiba survived several crises in 1965, and continued to lead the Tunisian Republic with a firm hand. His most dramatic move was to revive Tunisia's enmity toward the United Arab Republic (UAR) by suggesting that new talks be initiated to resolve the Arab-Israeli conflict. At home, he adopted new measures to restrain criticism of his economic development policies and to strengthen the grip of his Socialist Destour party.

President Bourguiba's Proposals. In February and March, President Bourguiba visited the UAR, Saudi Arabia, Jordan, Lebanon, Kuwait, Iran, Turkey, and

— TUNISIA · Information Highlights —

Area: 48,332 square miles.
Population: 4,565,000 (July 1, 1964 est.).
Chief Cities (1963 est.): Tunis, the capital, 680,000; Sfax, 65,635, Sousse, 48,172; Bizerte, 44,681.
Government: *President*—Habib Bourguiba (elected 1959; re-elected 1964). *Parliament*—National Assembly, 90 members (Socialist Destour party).
Religious Faiths: Muslims, 92% of population; Jews, 1.5%; Roman Catholics, 1%.
Education: *Literacy rate* (1956)—16% of population aged 10 and over. *Total school enrollment* (1962–63)—589,426 (primary, 532,581; secondary, 48,889; teacher-training, 2,176; vocational, 2,482; higher 3,298).
Finance (1963): *Revenues,* $114,200,000; *expenditures,* $114,200,000; *public debt* (1960), $147,000,000; *monetary unit,* dinar (0.525 dinar equals U.S.$1.).
Gross National Product (1963): $746,000,000.
Economic Indexes (1964): *Industrial (mining) production* (1958=100); *agricultural production,* 124 (1956–57=100); *cost of living,* 101 (1958=100).
Manufacturing (metric tons, 1964): Cement, 455,000; wine, 179,000; olive oil, 120,000; fuel briquets, 7,300.
Crops (metric tons, 1964): Olives (1963), 450,000 (ranks 5th among world producers); grapes, 258,000 (rank, 15th); wheat, 450,000; barley, 130,000; citrus fruit, 61,000; dates, 25,500; figs, 24,000.
Minerals (metric tons, 1964): Phosphate rock, 2,751,000; iron ore, 939,000; salt, 214,000; lime, 175,000; lead, 13,421; zinc, 3,252; silver, 12,635 troy ounces.
Foreign Trade (1964): *Exports,* $130,000,000 (chief exports: olive oil, $22,700,000; phosphates, $22,000,000; wine, $17,000,000; wheat, $5,300,000); *imports,* $248,000,000 (chief imports, 1963: wheat, $8,500,000; sugar and honey, $5,900,000; medicinal and pharmaceutical products, $5,600,000). *Chief trading partners* (1963): France (took 50% of exports, supplied 48% of imports); Italy (took 17% of exports, supplied 10% of imports); U.S. (took 1% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 5,460 miles (4,135 paved); *motor vehicles* (1964), 83,900 (automobiles, 50,000); *railways* (1963), 1,213 miles; *merchant vessels* (1964) 9 (20,000 gross registered tons); *National airline,* Tunis-Air; *principal airport,* El Aouina.
Communications: *Telephones* (1964): 31,840; *television sets* (1963), 4,000; *radios* (1963), 300,000; *newspapers* (1962), 5 (daily circulation, 120,000).

KEYSTONE PRESS

TUNISIAN PRESIDENT Habib Bourguiba (left) arrives in Amman, Jordan, on March 3, 1965, for talks with Jordan's King Hussein I (right). Bourguiba made a two-month tour of Middle Eastern countries.

Yugoslavia. The original purpose of his trip was to raise support for Tunisian development. However, that goal shifted by the time he reached Lebanon, and on March 11 he proposed in a speech that the Arab world end its policy of refusing to recognize Israel and concede defeat in its efforts to annihilate that nation. On April 21, after his return to Tunis, Bourguiba proposed that talks be resumed between Israel and the Palestinian refugees under the terms of the 1948 United Nations truce. According to the proposed truce provisions, Israel would return to a Palestinian Arab state part of the territory it had been granted in 1948, and would allow Arab refugees who had fled from Israel in 1948 to return. Bourguiba suggested that the Arab nations would in return end their cold war with Israel.

UAR President Gamal Abdel Nasser, who has consistently pursued an anti-Israeli policy, bitterly denounced Bourguiba. Demonstrators attacked the Tunisian embassies in the UAR, Syria, and Iraq. Diplomatic relations between Tunisia and the UAR were broken off on April 27–28, and Bourguiba refused to attend the Arab League meetings held in Cairo on May 26–30 and in Casablanca on September 13–17.

Political Dissent. A conflict with the workers arose over the implementation of decisions made at the 7th congress of the Socialist Destour party, held in October 1964. Though consistently loyal to Bourguiba, the Union Générale des Travailleurs Tunisiens (UGTT) remained politically distinct from the party. The decision to organize professional cells in the party meant that UGTT would, in effect, lose its strength among the workers.

The UGTT had incurred official disfavor late in 1964 when it resisted the government's policy of fixing salaries and at the same time following deflationary policies. The government's action caused a drop in real income, which the workers opposed. Tension between the government and the UGTT came to a climax in April when an excursion boat belonging to a UGTT cooperative had a serious accident. The UGTT secretary general, Habib Achour, was charged with lax management, his parliamentary immunity was removed, and legal charges were brought against him. He was subsequently removed from office.

The dispute then shifted to the meetings of the International Confederation of Free Trade Unions (ICFTU), held in Brussels, where Ahmed Tilili, who had been removed in 1963 as secretary general of the UGTT because of his independent views, protested against Bourguiba's coercive tactics and refused to recognize a pro-Bourguiba delegation sent to replace the UGTT group. But the government finally prevailed; Achour was removed from office, and Tilili went into exile.

Cooperatives. President Bourguiba experienced resistance in implementing a highly centralized scheme for cooperatives. Under Ahmed Ben Salah, minister for plans and the national economy, the government embarked on an ambitious program of organizing producer, consumer, and agricultural cooperatives. Early resistance came from the UGTT, which had taken the initiative in this area and was running some of the most profitable cooperatives. These were now compelled to join the government system.

The government also met opposition in building agricultural cooperatives to exploit the 500,000 acres of land recovered from French farmers in 1964. At Msaken, once a party stronghold, several thousand olive farmers rioted, and there were 147 arrests. The government reacted forcefully, and some 70,000 farmers were enrolled in the farm cooperatives by the end of 1965.

Douglas E. Ashford
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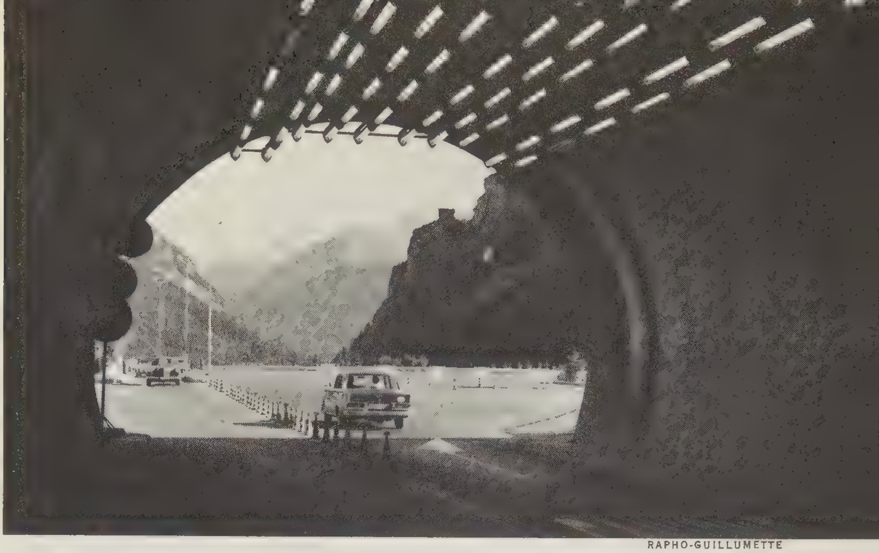
TUNNELS

Construction's "underground" workers, the hard-rock tunnelers and sandhogs, continued to work on many major tunnels in 1965, some for automobiles and trains, and others for water and sewage.

Road and Rail Tunnels. Mont Blanc Tunnel, the world's longest highway tunnel, was opened on July 16. It completes the first all-season highway through the Alps between France and Italy, extending 7.25 miles through Mont Blanc and shortening the distance between Rome and Paris by 125 miles.



MONT BLANC TUNNEL, 7-mile link between France and Italy, became the world's longest road tunnel when it opened on July 16, 1965. Cars, shown entering from the Italian side, avoided 60 miles' travel on twisting highways across Alps.

RAPHO-GUILLUMETTE

Swiss tunnelers holed through another highway tunnel in the Alps, the 4.1-mile-long San Bernardine bore in Grisons Canton. The 3-mile Felber Tauern Tunnel in Austria is scheduled for completion in the fall of 1966.

Construction began during 1965 on a highway tunnel through the Pyrenees Mountains linking Bielsa, Spain, with Aragnouet, France. The $2-million, 9,840-foot-long bore is being driven by a joint French-Spanish contractor group.

A $12 million vehicular and pedestrian sunken-tube tunnel is scheduled for completion in Marseille in 1966. It will relieve a traffic bottleneck that has existed since retreating Germans blew up a bridge across the city's harbor in World War II.

Work continues on a tunnel to run from Montreal under the St. Lawrence River's north channel to Charron Island, where it will link up with a bridge over the south channel and form the $75 million Louis Hippolyte Lafontaine Bridge-Tunnel complex. Construction crews have floated into place some of the biggest sunken-tube tunnel sections ever built. While constructing a cast-in-place section inside a vast cofferdam extending over a half mile into the river, the contractor precast seven three-celled units 120 feet wide and 360 feet long, each weighing 32,000 tons. A part of the cofferdam was then flooded and the big sections were floated out into the river and sunk in a trench, forming a tunnel 90 feet below water and nearly 50 feet below the river bed.

Denmark has announced an international design competition for a bridge or tunnel to link the islands of Zealand and Fyn in a 12.5-mile crossing of the Great Danish Belt. The cost of the crossing has been estimated at $288 million.

Subway Tunnels. A growing awareness of the threat of automotive strangulation in urban areas around the world has spurred cities to improve their rapid transit systems or plan new ones. In Munich, West Germany, construction began on a 22-mile system scheduled to be finished in 1990. In Brussels, Belgium, ground was broken for the city's first six miles of subway. In Lyon, France, plans were announced to start a 24-mile subway in the near future. In Moscow, USSR, 12 miles of new subway were under construction, extending to 79 miles the new line built since 1959.

Despite difficult subsoil conditions, Hungarian subway builders progressed on a new 6-mile subway to tie in with a 2-mile line completed in 1896.

A delegation of Japanese engineers has begun investigations for a proposed 12-mile subway in Mexico City. However, because of its unstable soil conditions, the city may build instead a monorail or a conventional elevated line.

San Francisco's Bay Area Rapid Transit Project, a $1 billion regional rail network, was scheduled to go into full-scale construction during 1966 with nearly $350 million in funds appropriated. The project includes a 6-mile-long sunken-tube tunnel under San Francisco Bay.

In New York City, work continued on a $100 million improvement program for the world's largest subway system, which is 237 route miles in length. A two-track extension of the Sixth Avenue line was being built by the cut-and-cover method, and another extension under Sixth Avenue neared completion.

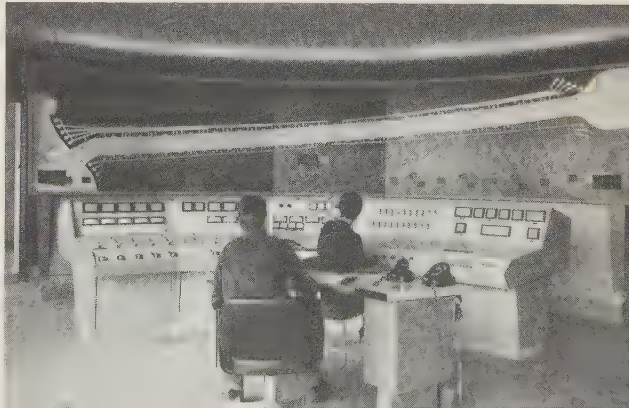
Design work began during 1965 on a $431 million, 25-mile rail rapid transit system for Washington, D.C. Plans were under way to form a metropolitan transit agency that will include the capital's suburban areas in Virginia and Maryland.

Rotterdam expects to open its new subway by the end of 1967. The $40 million project includes spectacular sunken-tube tunnel construction in the heart of the city where huge concrete tunnel sections were built in the dry, then floated and moved along temporary canals.

Water Tunnels. Lebanon finally holed through its 9.9-mile Awali Tunnel after nearly eight years' construction difficulties, including a water strike that washed in the tunnel roof and filled nearly 10,000 feet of tunnel with eroded sandstone before it was

CONTROL ROOM of the new Mont Blanc Tunnel directs the flow of cars and trucks under a 15,771-foot Alpine mountain.

RAPHO-GUILLUMETTE



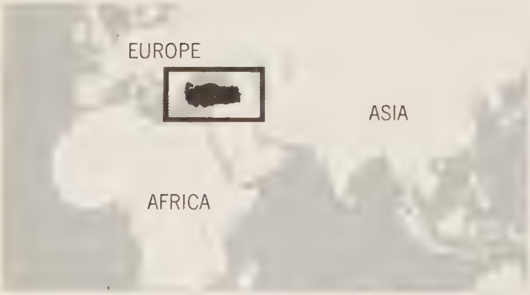
controlled. The tunnel will deliver 70.6 billion cubic feet of water annually.

In New York City, the Board of Water Supply completed about 40% of its 25,000-foot-long, 10-foot-diameter water tunnel deep under New York harbor. The big bore, running from Brooklyn to Staten Island, is being blasted more than 900 feet below ground level in hard rock.

Construction of impressive water tunnels as part of California's vast State Water Project got under way in 1965. Work began on the first of four big tunnels high in the Tehachapi Mountains north of Los Angeles, where the 444-mile-long California Aqueduct burrows under high peaks in its journey from northern California. A $33.8 million contract for the 4.8-mile Carley V. Porter Tunnel was awarded in August. Construction was scheduled to begin soon on a 30-foot-diameter, 37,765-foot-long tunnel outside Los Angeles, to cost an estimated $66 million.

William W. Jacobus, Jr.
Associate Editor
"Engineering News Record"

TURKEY



Turkey's domestic affairs in 1965 were highlighted by elections and two major political changes. In foreign affairs, the Turkish government sought a rapprochement with the Soviet Union at the expense of Turkey's formerly close ties with the United States.

The Ürgüplü Government. The coalition government headed by Prime Minister Ismet Inönü was forced out of office on Feb. 13, 1965, by the united action of the Justice, Republican Peasants' Nation, New Turkey, and Nation's parties. The issue immediately responsible for the downfall of the Inönü government was the 1965–66 budget. A less apparent but more important cause was the Justice party's plan to prove that the Turkish army would tolerate a change of government in an election year and to assure a free election. On February 16, Sen. Suat Hayri Ürgüplü, a political independent, became prime minister of a four-party coalition government.

TURKEY · Information Highlights

Area: 301,380 square miles.
Population: 31,118,000 (Oct. 20, 1964, est.).
Chief Cities (1960 census): Ankara, the capital, 129,934; Istanbul, 1,466,535; Izmir, 271,023; Adana, 231,548.
Government: *President*—Gen. Cemal Gürsel (elected 1961); *Premier*—Süleyman Demirel (appointed 1965). *Parliament*—Grand National Assembly (Senate, 186 members; Assembly, 450 members); Assembly party seating (1965)—Justice party, 240; Republican People's party, 134; Nation's party, 31; New Turkey party, 19; Worker's party, 15; Republican Peasants' Nation party, 11.
Religious Faiths: Muslims, 99% of population; Roman Catholics, 0.07%.
Education: *Literacy rate* (1960)—38% of population aged 15 and over. *Total school enrollment* (1963–64)—4,361,583 (primary, 3,644,089; secondary, 470,480; teacher-training, 42,798; professional, 155,701; university, 48,515).
Finance (1964 est.): *Revenues,* $1,481,000,000; *expenditures,* $1,498,000,000; *public debt,* $2,042,000,000; *monetary unit,* lira (9 liras equal U.S.$1).
Gross National Product (1964): $8,100,000,000.
National Income (1964): $6,933,000,000; average annual income per person, $223.
Economic Indexes (1964): *Industrial production* (1963), 125 (1958=100); *agricultural production,* 142 (1956–57=100); *cost of living,* 154 (1958=100).
Manufacturing (metric tons, 1964): Cement, 2,960,000; sugar, 795,000; gasoline (1963), 562,000; crude steel, 446,000; meat (1963), 178,000; cotton yarn, 97,920; olive oil, 122,000.
Crops (metric tons, 1964): Wheat, 8,435,000 (ranks 9th among world producers); sugar beets, 4,570,000 (rank, 10th); barley, 3,200,000 (rank, 8th); maize, 900,000 (rank, 20th); rye, 700,000 (rank, 7th); olives, 694,000 (rank, 2nd); oats, 500,000 (rank, 15th); cottonseed, 528,000 (rank, 8th).
Minerals (metric tons, 1964): Coal, 12,914,000 (ranks 19th among world producers); chromite (1963), 403,887 (rank, 4th); iron ore, 976,000; salt, 355,000; gypsum, 200,000; pyrites, 113,000; crude petroleum, 5,897,000 barrels.
Foreign Trade (1964): *Exports,* $410,700,000 (chief exports: tobacco, $89,900,000; cotton, $88,200,000; hazelnuts, $50,200,000; raisins, $16,900,000); *imports,* $542,000,000 (chief imports, 1963: wheat and maslin, unmilled, $57,800,000; crude petroleum, $52,900,000; iron and steel, $50,400,000). *Chief trading partners* (1963): U.S. (took 14% of exports, supplied 31% of imports); West Germany (took 24% of exports, supplied 15% of imports); Britain (took 13% of exports, supplied 11% of imports.
Transportation: *Roads* (1964), 35,729 miles (6,214 paved); *motor vehicles* (1964), 196,000 (automobiles, 85,000); *railways* (1963), 4,907 miles; *merchant vessels* (1964), 118 (609,000 gross registered tons); *national airline,* Turkish Airlines; *principal airport,* Istanbul.
Communications: *Telephones* (1964): 286,450; *television station* (1964), 1; *television sets* (1964), 1,000; *radios* (1963), 1,633,000; *newspapers* (1961), 472 (daily circulation, 1,299,000).

Elections. On Oct. 10, 1965, Turkish voters turned out to elect the lower house of parliament. The election was generally conducted without serious incident, but the total vote of 9,275,481 represented only about 60% of the electorate—the lowest participation in a general election since Turkey's first contested election in 1947. The election gave the Justice party a working majority of 241 of 450 seats in the Assembly. The party also held a majority in the Senate, having won 79 of 150 seats in the 1964 senatorial election. In 1965 the Justice party received 4,913,186 votes (53% of the total); the Republican People's party won 2,663,195 (28.7%); the Nation's party, 583,842 (6.3%); the New Turkey

WIDE WORLD

SÜLEYMAN DEMIREL became prime minister of Turkey on Oct. 27, 1965, when the Justice party, which he heads, won a majority of the seats in the lower house of the Turkish parliament. He had served as deputy prime minister from February to October 1965, in a 4-party coalition government headed by Suat Hayri Ürgüplü, an independent.

Demirel was born in Isparta, Turkey, in 1924. He studied at the Istanbul Technical University, qualified as an engineer, and worked for a year (1949–50) in the United States. After returning to Turkey, he served as director-general of electrical studies in Ankara (1950–52), as director of several hydroelectric projects (1952–54), and as head of the Department of Dams and director-general of water control (1954–55). He received the first Eisenhower Fellowship for study in the United States in 1955. Demirel, who became active in Turkish politics in the early 1960's, was chosen to succeed Rağıp Gümüşpala as head of the Justice party in 1964.

party, 329,293 (3.5%); the Turkish Worker's party, 273,683 (3.0%); the Republican Peasants' Nation party, 211,266 (2.3%); and independents, 301,046 (3.2%).

The Demirel Government. On October 27 the head of the Justice party, Süleyman Demirel, formed a new cabinet. Most of the new ministers were relatively little known members of the moderate wing of the Justice party. A former provincial governor, Ihsan Sabri Çağlangil, was named foreign minister. No dramatic departures from past policy were included in the program that the new government presented to parliament on November 3. The Demirel cabinet promised to work for close relations with the West and, simultaneously, for better relations with the Soviet Union.

The major question facing the Justice party was whether the various wings of the party would cooperate in implementing a program. A secondary issue was the degree of control the party leadership would maintain over some people in the party who might still feel the necessity to avenge those Democrats who had been ousted from the government in 1960. The membership of the five-year-old Justice party consists mostly of former members of the Democrat party, the party that was removed from power by the 1960 coup. The three top Democrat leaders were hanged and 450 of their followers were imprisoned.

Relations with the United States. United States refusal to support Turkey against Greece in the conflict over Cyprus during 1964 triggered a deterioration of U.S.-Turkish relations. Turkey, a member of NATO since 1952, notified the United States in December 1964 that it was not interested in participating in the mixed-manned nuclear fleet, which the United States had proposed for NATO's defense. The announcement was followed by disputes over rental payments for U.S.-manned bases in Turkey, U.S. hesitation in participating in the Keban Dam project, the manner in which U.S. firms were operating in Turkey, and Turkish support for Pakistan during the Kashmir crisis in September 1965. On Sept. 8, 1965, Pakistan appealed to Turkey for military assistance against India. Turkey, feeling obligated to respond as a comember of the Central Treaty Organization, airlifted an unknown quantity of military supplies. United States objections further impaired its relations with Turkey.

Relations with the Soviet Union. Soviet-Turkish relations improved considerably during 1965. The change began with the visit of Turkish Foreign Minister Feridün Cemal Erkin to Moscow in November 1964. During the visit the Russians convinced the Turks that they supported an independent Cyprus with full rights for the Turkish minority on the island, and they did not insist on Turkey's withdrawal from NATO. Out of the meetings came a cultural exchange agreement, an invitation for Soviet Foreign Minister Andrei Gromyko to visit Ankara, and an agreement to develop trade relations. The latter agreement culminated in a commercial protocol with provisions for increased trade and credit.

Cyprus. Although the Greek-Turkish dispute over Cyprus did not become critical during 1965, it continued to foster hostility between the two countries. In the spring, Turkey forced virtually all Greek nationals living in Turkey to leave the country.

Periodic fighting between the Greek and Turkish communities on Cyprus was reported during 1965. In July the Turkish government requested a conference with Greece and Britain to discuss action against the Cypriote government of Archbishop Makarios because of its attempt to eliminate parliamentary representation for the Turkish minority.

KEYSTONE

TURKISH ELECTIONS, held on Oct. 10, 1965, gave Justice party a majority of seats in the lower house of parliament.

Economy. Industrial output increased considerably during 1965. In May the Ereğli Iron and Steel Works, Turkey's second steel plant, was opened. During the year the government also managed to mobilize $120 million for the Keban Dam project on the Euphrates River. A larger cereal crop during 1965 provided a basis for optimism about the agricultural sector of the economy.

The foreign debt, which eats up about 40% of Turkey's foreign exchange earnings, continued to exert pressure on the country's balance of payments.

The situation was alleviated temporarily by a $250 million credit from the Organization for Economic Cooperation and Development and by postponement of $55 million in payments due in 1965.

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UDALL, Stewart L. See biographical sketch under United States.

UGANDA

ASIA
S. AMERICA
AFRICA

Events in Uganda during 1965 were dominated by domestic issues, including the settlement of the 60-year-old dispute between the kingdoms of Bunyoro and Buganda, within Uganda. The settlement caused a further political crisis between Uganda's leading political parties. In international affairs, Uganda protested foreign intervention in the rebellion in the Congo (Léopoldville) and advocated an African solution to the problem.

Political Developments. In 1893 the British granted two counties of the Kingdom of Bunyoro to the Kingdom of Buganda in return for Buganda's support against Bunyoro. Since that time, Bunyoro had sought the return of these "lost counties," Buyaga and Buganazzi. They finally were returned in November 1964 after the inhabitants of these areas overwhelmingly approved the change in a referendum. The result of the referendum was viewed as a victory for Prime Minister Milton Obote over President Edward Mutesa II, who, as kabaka (king) of Buganda, opposed returning the counties to Bunyoro.

UGANDA · Information Highlights

Area: 91,134 square miles.
Population: 7,551,000 (June 30,1965, est.).
Chief Cities (1959 census): Kampala, the capital, 46,735; Jinja, 29,741; Mbale, 13,569; Entebbe, 10,941.
Government: *President*—Sir Edward Mutesa II (took office Oct. 9, 1963); *Prime Minister*—Milton A. Obote (took office May 1, 1962). *Parliament*—National Assembly, 92 members; party seating (1965): Uganda People's Congress, 61; Democratic party, 16; Kabaka Yekka party, 15.
Religious Faiths: Roman Catholics, 30% of population; Protestants, 27%; Muslims, 5%; others, 38%.
Education: *Literacy rate* (1959)—25% of population aged 16 and over. *Total school enrollment* (1963)—526,641 (primary, 466,559; secondary, 49,358; teacher-training, 3,907; technical-vocational, 4,227; higher, 2,590, in 1964–65, including students studying abroad).
Finance (1965 est.): *Revenues,* $116,500,000; *expenditures,* $144,200,000; *monetary unit,* East African shilling (7.143 shillings equal U.S.$1).
Gross Domestic Product (1964): $568,000,000.
Economic Index: *Cost of Living* (1964), 110 (1958=100).
Manufacturing (metric tons): Sugar (1964), 147,000; meat (1961), 94,000; cement (1963), 55,000; lumber (1963), 35,000 cubic meters.
Crops (metric tons, 1964–65 crop year): Coffee, 162,000 (ranks 5th among world producers); tea, 7,600 (rank, 14th); peanuts (1962–63), 163,000; cottonseed, 152,000.
Minerals (metric tons, 1964): Copper, 18,520 (smelter production); apatite, 11,200; lime (1963), 11,000; salt (1963), 2,700; beryl, 408; tin, 216; lithium (1963), 48.
Foreign Trade (1964): *Exports,* $180,320,000 (chief exports: coffee, $98,000,000; cotton, $44,500,000; copper, $17,400,000); *imports,* $91,840,000 (chief imports, 1963: synthetic fabrics, $5,900,000; clothing, $3,500,000; gasoline, $3,000,000). *Chief trading partners* (1963): Britain (took 19% of exports, supplied 32% of imports); U.S. (took 27% of exports, supplied 4% of imports); West Germany (took 8% of exports, supplied 11% of imports).
Transportation: *Roads* (1964), 31,332 miles (939 paved); *motor vehicles* (1964), 36,697 (automobiles, 28,030); international airlines (1963), 6; *principal airport,* Entebbe.
Communications: *Telephones* (1964): 16,138; *television stations* (1964), 4; *television sets* (1964), 4,000; *radios* (1963), 100,000; *newspapers* (1960), 5 (daily circulation, 53,000).

The actual transfer of the lost counties precipitated a political crisis in Uganda. The Kabaka Yekka party, representing Buganda's interests, had dissolved its coalition with the ruling Uganda People's Congress (UPC) in August 1964, when the UPC agreed to the referendum. The break with the UPC created a split in the Kabaka Yekka between the neotraditionalists and the progressives. Many of the progressives deserted the Kabaka Yekka and joined the UPC. Prime Minister Obote, who heads the UPC, welcomed the defections from the Kabaka Yekka, for the defections strengthened his efforts to change Uganda into a one-party state.

Throughout 1965 the UPC continued to work for the dissolution of opposition parties and for the incorporation of defectors into the UPC. On February 1, Obote refused to grant official recognition to an opposition party. On April 30 the UPC secretary, Grace Ibingira, announced that the UPC would introduce legislation to ban the Kabaka Yekka in spite of the group's intention to expand from simply a Buganda party to a national one.

Foreign Affairs. In February, skirmishes occurred between Ugandan troops and Congolese rebels on the border between Uganda and the Congo (Léopoldville). In that same month, the Uganda government protested the American and Belgian bombings of two of its border villages. The Uganda government urged that the United States stop all aid to the Congolese government and allow the Organization of African Unity to find a solution to the problem. The tense situation improved with the final defeat of the Congolese rebels in April.

On October 28, Adoko Nekyon, minister of planning, announced that trade would resume between Uganda and Congo (Léopoldville).

Economy. During 1965, Uganda's economy flourished. The economy was paced by a 25% increase in exports, from $143,920,000 in 1963 to $180,320,000 in 1964, while imports increased only 5%, from $86,520,000 in 1963 to $91,840,000 in 1964. Exports of coffee, Uganda's staple product, rose in value from $75,000,000 to $98,000,000. Economic aid, including a $15,400,000 loan from the USSR for road construction and commitments for other development projects, also boosted the economy.

Other international economic agreements included a $11,200,000 loan from Yugoslavia, $15,000,000 in loans and gifts from Communist China, and $16,800,000 from Britain for development projects. The International Finance Corporation agreed to invest $7,728,000 in Uganda to construct an integrated cotton mill at Jinga.

The Uganda government prohibited imports of Japanese products in an effort to correct Uganda's adverse balance of trade with Japan. Imports from Japan in 1964 were valued at $13,700,000 and exports at $5,000,000.

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UNESCO. See United Nations Educational, Scientific and Cultural Organization.

USSR

PICTORIAL PARADE

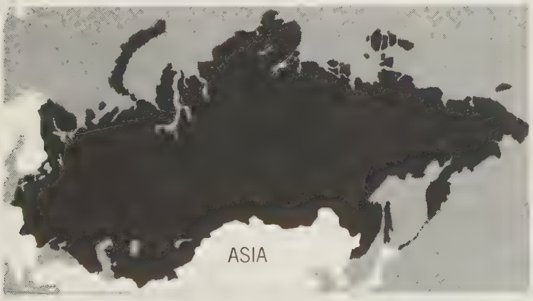
SOVIET MILITARY PARADE in Moscow's Red Square, celebrating the 48th anniversary of the October Revolution, includes display of tactical missiles.

UNION OF SOVIET SOCIALIST REPUBLICS

The Soviet Union seemed unusually subdued after Nikita Khrushchev's overthrow in October 1964. Gone were the threatening gestures toward the West, the bitter tirades against Communist China, the irreverent remarks by the Kremlin leaders. Khrushchev's successors were two sober, serious bureaucrats, Leonid I. Brezhnev and Aleksei N. Kosygin. Methodically, they tried to solve the country's economic ills, while problems of foreign affairs, ideology, art, literature, even religion and atheism, tended to fall into the background. The new Soviet leaders struggled with the agricultural tax, land reclamation, industrial slowdowns, small factory profits, and the slow sale of consumer goods.

The Soviet people responded well to this quiet regime, relieved that the Khrushchevian police terror of 1963–64 had definitely ended. It was no longer dangerous to listen to foreign radio broadcasts, for neither the Voice of America nor the British Broadcasting Corporation was jammed. Even

USSR · Information Highlights



Area: 8,600,000 square miles.
Population (1965): 229,000,000.
Chief Cities (1964 est.): Moscow, the capital 6,334,000; Leningrad, 3,218,000; Kiev, 1,292,000; Gorky, 1,066,000; Tashkent, 1,061,000; Kharkov, 1,048,000; Novosibirsk, 1,013,000.
Government: *President*—Nikolai V. Podgorny; *Premier*—Aleksei N. Kosygin; *Communist Party first secretary*—Leonid I. Brezhnev; *Parliament*—Supreme Soviet: Soviet of the Union (791 deputies); Soviet of Nationalities (652 deputies).
Religious Faiths: Russian Orthodox, 50% of population; Muslims, 10%; Protestants, 5%; Roman Catholics, 4%; Jews, 1%.
Education: *Literary rate* (1965)—97% of adult population. *Total school enrollment* (1965)—44,000,000 (nursery and kindergarten, 7,700,000; primary, 25,400,000; secondary, 4,500,000; technical/vocational, 3,500,000; university/higher, 2,900,000).
Finance (1965 est.): *Budget revenues,* $109,600,000,000; *expenditures,* $109,300,000,000; *public debt,* $28,700,000,000; *monetary unit,* ruble (0.9 ruble equals U.S.$1).
National Income (1964): $197,800,000,000; average annual income per person, $875.
Economic Indexes (1964): *Industrial production* (1958=100) 170 (heavy industry, 181; light industry, 151); *agricultural production* (1956–57=100), 121; *taxation* (1958=100), 144.
Manufacturing (1964): Steel ingots and castings, 84,995,000 metric tons; cement, 64,900,000 metric tons; electricity, 509,000,000,000 kilowatt-hours; lumber, 260,000,000 cubic meters; tractors, 329,000; grain harvesting combines, 84,000.
Crops (metric tons, 1964): Potatoes, 93,000,000 (ranks 1st among world producers); sugar beets, 80,300,000 (world rank, 1st); wheat, 74,200,000 (world rank, 1st); barley, 28,500,000 (world rank, 1st); maize, 19,700,000 (world rank, 2nd); rye, 13,500,000 (world rank, 1st); sunflower seed, 5,990,000 (world rank, 1st); oats, 5,500,000 (world rank, 3rd); cottonseed, 3,480,000 (world rank, 2nd); millet, 3,470,000; grapes (1963), 2,572,000.
Minerals (metric tons, 1964): Petroleum (1965), 242,000,000 (ranks 2nd among world producers); iron ore, 146,000,000 (world rank, 1st); coal, 554,000,000 (world rank, 1st); salt, 8,800,000 (world rank, 3rd); manganese, 6,700,000 (world rank, 1st); bauxite, 4,400,000 (world rank, 2nd); gypsum, 4,300,000 (world rank, 4th); chromite (1963), 1,229,000 (world rank, 1st); asbestos, 1,200,000 (world rank, 2nd); copper, 699,000 (world rank, 2nd); zinc, 408,000 (world rank, 3rd); lead, 363,000 (world rank, 2nd); diatomite, 308,000 (world rank, 2nd); silver, 27,000,000 troy ounces (world rank, 5th); gold, 5,600,000 troy ounces (world rank, 2nd); natural gas, 130,000,000,000 cubic meters (world rank, 2nd).
Foreign Trade (1964): *Exports,* $7,674,000,000 (chief exports: machinery, $1,534,800,000; oil and coal, $1,381,320,000; ore and metals, $997,620,000); *imports,* $7,729,000,000 (chief imports: machinery, $2,705,150,000; consumer goods, $1,391,220,000; food, $1,004,770,000). *Chief trading partners* (1964): East Germany, 18% of total trade; Czechoslovakia, 13%; Poland, 9%.
Transportation (1965): *Roads,* 600,000 miles (187,000 paved); *railways,* 80,000 miles; *inland waterways,* 85,000 miles; *merchant vessels,* 1,200 (8,000,000 deadweight tons); *principal airports,* Moscow, Leningrad, Kiev, Tashkent.
Communications (1965): *Telephones,* 7,200,000; *television stations,* 130; *television sets,* 12,000,000; *radios,* 35,000,000; *newspapers,* 6,595 (daily circulation, 98,000,000).

PIX

LEONID ILYICH BREZHNEV, first secretary of the Soviet Communist party, ruled the Soviet Union jointly with Premier Aleksei Kosygin in 1965. Whether he would emerge as the sole dictator remained a question at the year's end.

The son of a steelworker, he was born in the Ukrainian town of Kamenskoye (later renamed Dneprodzerzhinsk) on Dec. 19, 1906. He graduated as an engineer from a metallurgical institute in 1935. In 1938 he became a functionary of the Ukrainian Communist party, which was then headed by Nikita Khrushchev, and he rose to power as Khrushchev's protégé. In 1952, Brezhnev was elevated to the real seat of Soviet power, the secretariat of the Soviet Communist party's Central Committee. He relinquished his position in the secretariat in 1960 to become president of the Soviet Union (chairman of the Presidium of the Supreme Soviet), but resumed his membership in the secretariat in June 1963. Resigning the presidency in July 1964, he became deputy party head only four months before helping to overthrow Khrushchev.

Communist party officials listened attentively to radio news from the outside world. But the Soviet man in the street, much as he enjoyed this comparatively relaxed atmosphere, apparently regarded Brezhnev and Kosygin as colorless men who could probably not last long.

AREAS AND POPULATIONS OF THE SOVIET REPUBLICS

Republic	Area (sq. mi.)	Population 1964 est.
Russian SFSR	6,600,000	125,240,000
Ukrainian SSR	240,000	44,900,000
Kazakh SSR	1,050,000	11,690,000
Uzbek SSR	156,000	9,997,000
Belorussian SSR	80,000	8,482,000
Georgian SSR	30,000	4,456,000
Azerbaidzhan SSR	33,000	4,455,000
Moldavian SSR	13,000	3,274,000
Lithuanian SSR	25,000	2,229,000
Kirgiz SSR	77,000	2,542,000
Tadzhik SSR	55,000	2,388,000
Latvian SSR	25,000	2,926,000
Armenian SSR	12,000	2,102,000
Turkmen SSR	187,000	1,835,000
Estonian SSR	17,000	1,265,000
Total USSR	8,600,000	227,781,000

Source: *National Economy of the USSR in 1963*, Moscow, 1965.

ECONOMY

The post-Khrushchev regime tackled the Soviet Union's urgent agricultural problems, which had been aggravated rather than eased by Khrushchev's attempt to farm 100 million acres of marginal, drought-stricken land.

Agricultural Reforms. A series of major decrees were issued during the first half of 1965 for the purpose of raising farm income so that the peasants would perform better work. On January 1 the income taxes on collective farms were reduced 50% by levying them on net farm income rather than on gross earnings. Beginning in April, the debts of the poorer collective farms to banks and tractor repair stations were cancelled. The government assumed all costs for soil improvement, and pensions were established for former collective farmers now working on state farms.

Simultaneously, the government prices for collective farm produce were raised 36% for rice; 37% for millet; 50% for wheat, buckwheat, and rye; and 20% to 100% for cattle, sheep, and hogs. The collective farms were also told that their forced sale of grain to the state during each year from 1965 to 1970 would be only 85% of the forced sale in 1964. Any excess farm grain could be sold to the state at a higher price than that paid for the forced sale. Similarly, the forced sale of meat in 1965 was to be 5% lower than in 1964. During April, the prices for shoes and clothing in rural stores were reduced to the price level in city stores. Starting in May, collective farmers were allowed to set their own prices on garden produce sold in city markets, hunters and fishermen were permitted to sell their catch in the same markets, the tax on market sales was to be used only for improving market facilities, and closed markets were reopened at railway stations and river docks.

By June, officials and technicians on state farms were allowed bonuses as high as 10% of their salary for overfulfilling plans for production or sale of crops. Meanwhile, minimum salaries in rubles equivalent to $165 per month were guaranteed for collective-farm chairmen, $88 for collective-farm agronomists, and $77 for collective-farm technicians.

These measures might improve the lot of the peasants over the next several years, and result in

PICTORIAL PARADE

SOVIET FOREIGN MINISTER Andrei Gromyko, in address to UN General Assembly on Sept. 24, 1965, proposed treaty to prevent spread of nuclear weapons, especially through weapons-sharing systems such as the U.S.-backed Multilateral Force (MLF). He also submitted a draft declaration against interference in the internal affairs of other countries.

SOVFOTO

SOVIET LEADERS celebrate 20th anniversary of "VE" Day in Red Square, Moscow, May 9. Defense Minister Malinovsky (speaking) is flanked by President Mikoyan (at left) and by Communist party chief Brezhnev and Premier Kosygin (at right).

increased crop production. Even in 1965, the trade of food in the markets had increased 100% over the previous year.

The effect of these agricultural innovations was blunted in 1965 by adverse weather conditions, the worst for crops that the Soviet Union had experienced in 40 to 50 years. A searing drought struck three major grain-growing regions: the Volga valley, West Siberia, and Khrushchev's "new lands" of north central Asia. Another breadbasket, the Ukraine, was soaked by unusually heavy rains, which flattened much of the ripening grain. As in 1964, the USSR had to become a major importer of free-world grain. By the autumn of 1965 the Soviet Union had sold $113 million worth of gold to the Bank of International Settlements in Switzerland, and $100 million worth to the Bank of France, in order to obtain hard currency for the purchase of no less than 10,000,000 tons of grain. Most of the grain bought was Argentinian or Canadian, rather than high-priced U.S. grain. Some Soviet officials were embarrassed by the new agricultural failure, and confessed to tourists that poor crops gave the Soviet Union an unfortunate world-image. At the close of 1965, Brezhnev announced that future agricultural plans would stress the irrigation of deserts and the drainage of swamps, so that a crop failure in one part of the country due to adverse weather there could be offset by good harvests in other climatic zones.

The Consumer. In a move to aid city dwellers, the government, in April 1965, decreed store price reductions of 6% to 20% for clothing, 15% for herring (a common breakfast dish), 45% for cocoa, and 21% for cameras. In May, disabled war veterans were granted free rides on buses and trolleys, priority in obtaining apartments and entering sanitariums, and higher pensions. Clothing styles improved so much that a middle-class Russian would not appear ill-dressed if transplanted to Paris or New York. But crop failures frustrated many of these attempts to improve the consumers' lot. Food for the cities and farm products used in the manufacture of consumer goods were in short supply. Even the Soviet press complained about store shortages of meat, butter, vegetables, fruit, clothing, shoes, furniture, dishes, iceboxes, radios, television sets, cameras, and watches. Attractive window displays only increased the disappointment of shoppers who found that inside the stores the shelves were half empty. Like Khrushchev, the new Soviet leaders were providing an economy of scarcity.

Industrial Reform. All other economic reforms were overshadowed by the industrial changes decreed in October 1965. Premier Kosygin bluntly explained that since increasing capital investments had not stopped the slowdown of industrial expansion, more drastic steps would have to be taken.

First, according to the premier's plan, factories and mines would no longer be judged efficient if they merely fulfilled production plans. Instead, they were to be rated by how much of the finished product was sold. Thus, for the first time in Soviet history, quality of output became more important than quantity. No longer, for example, could an auto factory manufacture cars without headlights or starters, and then claim it had fulfilled its production plan.

Second, Soviet industry would have to pay its own way. Previously, new plants had been built and old factories expanded at the expense of the state. These state funds were never repaid. Hereafter any money granted for expansion was to be a loan, not a gift. If a factory should lose money and needed a subsidy, the latter would be offered not as a grant, but as a loan. To repay these loans, factories would be allowed to retain more of their profits, instead of paying an 80% profits tax.

Third, an industrial manager would no longer receive from higher authorities a table of organization, ordering him to hire exactly so many engineers, foremen, and workers. Instead, the manager was to be told how much he could spend on wages. Within this framework, he could hire as many engineers, foremen, and workers as he needed. They were to be paid whatever wages the manager could afford. The first result of this reform will probably be unemployment, because the average manager will dismiss his incompetent personnel, then give the highest possible salaries to the remaining skilled staff.

Fourth, all of the 40 regional councils of industrial management created by Khrushchev were abolished, on the grounds that they fostered local favoritism and blocked the standardization of machinery parts. The government also did away with Khrushchev's Supreme Economic Council, the Soviet Economic Council, and inter-regional economic councils such as those in Central Asia, the Caucasus, and the Baltic states. In place of regional, inter-regional, and national economic councils, the government created 30 new industrial ministries, of which 7 were for production of munitions, 9 for machinery manufacture, and 14 for output of raw materials and consumer goods. Thus Khrushchev's decentralization of industrial management in 1957 was completely reversed, and the Soviet Union's economy was once again controlled from Moscow, as it had been in the time of Stalin. It remained to be seen whether this neo-Stalinism would reverse the post-Stalin slowdown of industrial growth.

Trade and Tourism. Soviet foreign trade continued

UPI

MOSCOW POLICE disperse Asian and Russian students who demonstrated against U.S. policy in Vietnam by attacking U.S. embassy on March 4, 1965.

to expand. In 1964 it had exceeded $15 billion for the first time in Soviet history. As in previous years, about 70% of foreign trade was with countries in the Soviet orbit, 20% with Western industrial nations, and 10% with underdeveloped countries outside of the Communist bloc. In 1965 the Soviet Union accounted for about 5% of total world trade. Soviet foreign aid commitments to underdeveloped nations amounted to approximately $3 billion, of which three fifths was promised to India, Indonesia, Egypt, Afghanistan, and Iraq. During the year the Soviet Union shipped fighter planes to India to strengthen Indian defenses against Pakistan and Communist China.

On July 1 the Soviet Union joined the International Patent Convention, thus extending to foreign inventors the same rights enjoyed by Soviet inventors. There were two Soviet motives: to buy foreign inventions more easily, and to sell Soviet inventions abroad.

More than a million foreign tourists visited the Soviet Union during 1965, mostly from nations within the Soviet orbit. To make tourism easier, the post-Khrushchev regime cut the time for issuing Soviet entry visas from two months to one week. It allowed tourists to convert rubles back into foreign currency when leaving the country, opened 100 Soviet cities to tourists, and established special stores were Russian beverages, confectionery, clothing, household appliances, and souvenirs were sold below cost if purchased with Western hard currency. Such foreign-currency stores had not existed in the Soviet Union since the early 1930's. Their revival indicated how desperate the government was to accumulate foreign exchange badly needed for trade expansion.

Manpower. The Soviet population, despite a declining birthrate, increased to 229 million in 1965. Of this total, 76 million (33%) were employees of the government—the world's largest bureaucracy. Three of every four able-bodied Soviet women were working at salaried jobs. As industrial technology expanded, unemployment began to be a serious problem for unskilled youths, particularly in provincial cities where the rate of unemployment was as high as 8%.

THE NEW GOVERNMENT

It is usual for a new government in almost any country to sweep out the top bureaucrats of the previous government. Yet, after Premier Khrushchev's fall, the Brezhnev-Kosygin dictatorship was slow to fire or demote Khrushchev's favorites. During most of 1965 there were few high-level personnel changes. However, the replacement of the regional economic councils by the new central ministries in the autumn provided an opportunity for quietly demoting officials who were unsympathetic to the post-Khrushchev regime. The shift of officials from one post to another was more like a game of musical chairs than a brutal Stalinist purge.

One of the important promotions was that of Kiril T. Mazurov, who rose from first Communist party secretary of Belorussia and candidate member of the party Presidium to full Presidium member and first vice premier of the Soviet Union. Dmitri F. Ustinov, who had been head of the Supreme Economic Council before it was abolished, rose to the secretariat of the party's Central Committee. Vladimir V. Matskevich, who had been dismissed by Khrushchev as minister of agriculture, was restored to that ministry. Vladimir I. Stepakov, editor of the principal government newspaper, *Izvestia,* was made chief of all Communist party propaganda. Young, handsome Dmitri S. Polyanski, edged up from being vice premier to first vice premier.

Leonid I. Brezhnev, first secretary of the Soviet Communist party, assumed an additional role as member of the government's Presidium on October 2. (Both Stalin and Khrushchev, before becoming premier, negotiated with diplomats and leaders of capitalist nations in their capacity as members of the government's Presidium. Protocol required this because their positions as party leaders permitted them to deal only with foreign Communists, not with representatives of foreign governments.)

In December, Anastas I. Mikoyan retired as president of the Soviet Union. He retained his membership in the governmental Presidium. The 70-year old Mikoyan appeared to be bowing out because of his age and ill health. He was replaced as president by Nikolai V. Podgorny, a food-industry expert, whose local Communist party organization in the city of Kharkov had been under Soviet press attack for several weeks. In view of these attacks, it seemed likely that Podgorny had been kicked upstairs to this relatively ceremonial job, rather than given a true promotion.

The little-known Ivan V. Kapitonov was promoted to the post of Communist party secretary, and another obscure person—Vladimir V. Shcherbitsky—became a candidate member of the all-powerful party Presidium. The loser in the December shifts appeared to be the former police chief, Aleksandr N. Shelepin, who had to relinquish both his vice premiership of the government and the chairmanship of the Committee for Party-State Control. The committee, renamed "People's Control," was handed over to Pavel Kovanov, a complete unknown. However, Shelepin still remained a secretary of the Soviet Communist party.

There were important demotions during the year. Vladimir N. Novikov disappeared when his Supreme Economic Council was abolished. Vitali N. Titov was exiled from the Central Committee's secretaryship to become second party secretary of Kazakhstan. Trofim D. Lysenko, the pseudogenetics expert for both Stalin and Khrushchev, retired into oblivion from his directorship of the Soviet Genetics Institute. Ilichev, the ideological czar of Khrushchev's regime, sank from the party's Central Committee secretariat to an assistant ministership in the government's Ministry for Foreign Affairs. During the autumn, when the new economic ministries were created, no less than 25 ministers were dismissed from the government cabinet.

Most of these personnel changes involved officials whose names were largely unknown to the Western world. But obviously what was at stake was the future leadership of the Soviet Union. Just as in the first two years after Stalin's death, leading Soviet newspapers in 1965 disagreed with one another, reflecting the conflicting opinions of the various top leaders. Speeches of the party Presidium leaders were rarely published in full, since each major newspaper deleted certain remarks it disliked. While the public believed that the Brezhnev-Kosygin team was not likely to last more than one year, local Soviet officials fearfully awaited a Stalinist-type purge, after the new Stalin or Khrushchev had won the battle for power.

FOREIGN AFFAIRS

The post-Khrushchev regime moved very cautiously in foreign relations, obviously desiring to avoid any risk of a major war. Besides wooing the underdeveloped nations of Asia and Africa, the Soviet Union sought closer ties with certain anti-Communist powers—France, Turkey, Japan, and others—who wished to assert greater independence of U.S. policy. The Soviet intent was to break up anti-Communist military alliances.

Relations with the West. Because of the war in Vietnam, Soviet-American relations continued to be strained. In January, Richard F. Stolz, the first secretary of the U.S. embassy in Moscow, was expelled from the Soviet Union for alleged espionage. On February 9, 2,000 Moscow students led by young Chinese and Vietnamese stoned the American embassy in Moscow, breaking about 200 windows while Soviet police watched without interfering. However, a similar student demonstration on March 4 was finally stopped by Soviet police and troops after 170 windows had been broken. Seven of the March demonstrators were arrested, and the Soviet government offered to pay for the damage to the embassy.

Soviet dislike for U.S. diplomats was reconfirmed on May 11 when Norris D. Garnett, a Negro cultural attaché of the American embassy in Moscow, was expelled from the country for allegedly spreading anti-Soviet propaganda among African students studying in Russia. During May the government newspaper *Izvestia* accused two other U.S. embassy officials, Malcolm Toon and Alan Logan, of being spies. Neither official, however, was expelled from the country. Meanwhile, the Soviet government created great difficulties for the cultural exchange program with the United States. Several American writers and scientists were forbidden to tour Russia

SOVFOTO

CULTURAL EXCHANGE agreement between U.S. and USSR brought the Cleveland Orchestra to the USSR in 1965. Here, George Szell conducts a concert in Leningrad.

PREMIER KOSYGIN is met on arrival in Peking on Feb. 5, 1965, by Chinese Prime Minister Chou En-lai. Kosygin stopped overnight in Peking on his way to Hanoi, North Vietnam, for talks with North Vietnamese officials on conduct of the Vietnamese war.

SOVFOTO

on the thin excuse that Soviet counterparts were unwilling to visit the United States. In the autumn the Soviet Union cancelled the Moscow engagement of the American musical comedy *Hello Dolly!*, and refused to accept a substitute stage show offered by the United States. In October, four U.S. army officers were roughed up by Soviet soldiers when an American military train was entering East Germany en route to West Berlin.

Speeches by Brezhnev and other Soviet leaders throughout 1965 claimed that U.S. military intervention in the Vietnamese war prevented any improvement in U.S.-Soviet relations. During the year Russia shipped a considerable quantity of arms and ammunition to North Vietnam, which was not required to pay for these military supplies.

In April a permanent delegation of the National Liberation Front of South Vietnam arrived in Moscow. The Soviet Union granted it diplomatic status, thereby recognizing the South Vietnamese Communist rebels as the legal government of South Vietnam. The Soviet Union publicly offered to send volunteer fighters to aid North Vietnam on three conditions: (1) if North Vietnam requested such aid; (2) if volunteers were needed; and (3) if U.S. "aggression" against North Vietnam were intensified. Apparently no volunteers were actually sent.

Uganda and the Soviet Union issued a joint statement denouncing U.S. "aggression" in Vietnam, and France and the Soviet Union jointly appealed for an end to foreign intervention in the Vietnamese war. India and the Soviet Union made a joint appeal in May to the United States to stop bombing North Vietnam. On September 24, Foreign Minister Andrei Gromyko proposed that the United Nations adopt resolutions condemning outside interference in any nation's internal affairs and preventing the spread of nuclear weapons to any more countries. The first resolution was aimed against U.S. intervention in Vietnam, while the second was intended to prevent the formation of a NATO force armed with nuclear weapons.

COSMONAUTS Leonov and Belyayev after 1965 flight in which Leonov "walked in space," pay homage at the grave of Konstantin Tsiolkovsky (1857–1935), space science pioneer.

SOVFOTO

Russia's fear of the proposed multilateral nuclear force also induced it to renew disarmament talks with the United States in the U.N. disarmament conference at Geneva, Switzerland. President Johnson suggested in July that disarmament negotiations be resumed, and the Kremlin accepted his proposal on July 12.

Soviet-British relations remained strained, largely because Britain supported U.S. policy in Vietnam. A major incident occurred in July when Gerald Brooke, a London professor of Russian literature, was sentenced by a Moscow court to five years' imprisonment for alleged espionage. He had been arrested by Soviet police while leading a British student tour through Russia. Relations between West Germany and the USSR were also unfriendly, although trade between the two nations did not decline.

Relations with Africa. As in the Khrushchev era, the new Soviet regime tried hard to establish close ties with the new African nations. A large Soviet program of cultural and educational exchange was directed toward African governmental leaders, rebel leaders, army officers, trade unions, and youth organizations. Aeroflot, the Soviet airline, made regular flights to nine African countries: Algeria, Congo (Brazzaville), Guinea, Mali, Morocco, Somalia, Sudan, Tunisia, and the United Arab Republic. Soviet policy in Africa suffered a setback when President Ben Bella of Algeria, a good friend of the Soviet Union, was overthrown. Russia condemned Rhodesia's declaration of independence in November, and proclaimed its support of Rhodesian Africans against Rhodesian whites.

Soviet efforts to woo Africa continued to be troubled by racial incidents between Russians and African students in the Soviet Union. In January, African students beat up a Soviet volunteer policeman in Leningrad. In March a student from Ghana was murdered in the Caucasian city of Baku. No less than 29 students were flown home to Kenya after staging a sit-down strike in the same city. African students complained to Western tourists that although the Soviet Union preached racial equality it did not practice it.

Relations with Asia. By late 1965, Soviet leaders were complaining publicly that a year of Soviet efforts to achieve a reconciliation with Communist China had met with no Chinese response. Speaking through a lead editorial in *Pravda* on November 28, the Soviet leaders declared that China would destroy the unity of world communism if it persisted in its attacks on the Soviet Communist party and in its presumptuous claim to be the sole spokesman for the Communist world. Meanwhile, the Chinese press claimed that the post-Khrushchev Soviet leaders were worse than Khrushchev, and that the Kremlin was conspiring with the United States to obtain a Communist defeat in the war in Vietnam. China supported Pakistan in the brief undeclared war between Pakistan and India, while the Soviet Union tried to mediate the conflict. Russia expelled several Chinese students in March for fighting with Soviet police during a Moscow student demonstration against the U.S. embassy. Peking gave the expelled students a hero's welcome. Nevertheless, in April, the Soviet Union and Communist China concluded a trade agreement, providing for the exchange of Chinese cloth, shoes, food and minerals for Soviet metals, timber, chemicals, machinery, and airplanes. (See also COMMUNISM.)

Soviet-Israeli relations remained cool, especially after *Izvestia*, in April and May, criticized Israeli diplomats in the Soviet Union for allegedly insulting Soviet Jews.

SPACE EXPLORATION AND MILITARY AFFAIRS

Soviet rocketry continued to display its prowess in 1965 with several successful launchings. The most spectacular came on March 18 when Lt. Col. Aleksei A. Leonov "walked" in space as his co-pilot, Col. Pavel I. Belyaev, steered their spaceship. On April 23 the Soviet Union launched its first communications satellite, which promptly relayed a television program from eastern Siberia to Moscow. There were four unsuccessful attempts during the year to land rockets carrying scientific instruments on the moon. The first one, launched on May 12, and the third and fourth, dispatched on October 8 and December 3, destroyed themselves when they crashed into the moon at high speed. The second, sent up on June 8, went off course and missed the moon by 100,000 miles. (See SPACE EXPLORATION.)

Three rockets never before shown to the public were displayed in military parades in 1965: a 110-foot-long intercontinental missile using liquid fuel, another long-range 65-foot missile consuming solid fuel, and a short sold-fuel missile (mounted on a huge tractor) with a range of 1,100 miles. (See MISSILES.)

According to Western detection devices, the Soviet Union exploded a nuclear device underground on Jan. 15, 1965, and probably conducted two more underground atomic tests on March 3 and October 8. (See ATOMIC ENERGY.)

Soviet military history was rewritten in 1965 to reacknowledge the wartime achievements of Generalissimo Stalin. A retired marshal of tank troops described in his memoirs how Stalin had planned the capture of Berlin in 1945. Brezhnev won unexpected applause in May when he reminded his listeners in a Kremlin speech that Stalin had headed the State Defense Committee during World War II. By midyear the army emphasized in its museum display that Stalin had also been war minister when the Soviet Army defeated Hitler's Wehrmacht.

An even more unusual revision of history was the posthumous rehabilitation of Corps Commander Dumenko, who had been executed by the Soviet police for allegedly conspiring against the Communist regime. His execution had been ordered not by Stalin, but by Lenin. The Soviet high command thus dared to state that even the sacred Lenin could have been wrong on military matters.

The increasing independence of Soviet military leaders was also expressed by Marshal M.V. Zakharov, who had been dismissed as chief of the General Staff by Khrushchev and reinstated in the same post by the Brezhnev-Kosygin regime. In a long article published in February in a military newspaper, Zakharov wrote that henceforth Soviet military leaders must plan and direct the indoctrination and personnel work of the armed forces. Previously these functions had been performed by commissars of the Communist party.

CULTURE

During 1965 the struggle continued between neo-Stalinist critics, editors, and artistic leaders on the one hand, and artists and writers demanding more freedom of expression on the other. Beginning in February, the Communist party newspaper *Pravda* published a series of articles stating that writers and artists need not cater to the personal taste of Kremlin leaders as had been required during the dictatorships of Stalin and Khrushchev. *Pravda* attacked both the *October* literary magazine and the newspaper *Izvestia* for criticizing certain writers who did not conform to the official canons of art. Apparently the Kremlin disagreed, for in September the chief editor of *Pravda*, A.M. Rumyantsev, was abruptly dismissed. Three prominent Soviet writers were arrested in the autumn on charges of sending uncensored manuscripts out of the Soviet Union for publication in the West. Thus the Brezhnev-Kosygin regime, after initial hesitation, appeared to be backing the neo-Stalinists against the exponents of greater artistic freedom.

The Soviet press complained that Russian youth was being influenced by the criticisms of Soviet life broadcast by Western radio stations. Official complaints were also published that many Soviet youths had become apathetic, apolitical, individualistic, and uninterested in past Soviet achievements. Western tourists observed that the de-Stalinization campaign, followed by the downgrading of Khrushchev, had led to the disillusionment of Soviet youth, as well as of their elders.

The Brezhnev-Kosygin regime appeared to be more tolerant toward religion than the deposed Khrushchev had been. Few of the clergy were arrested or imprisoned during 1965. Religious congregations remained large, neither increasing nor decreasing. Many youths and upper-class citizens dared to worship in public. The Hebrew faith was no longer systematically persecuted. Soviet Jews were permitted to use state bakeries for the preparation of matzoh holy bread for the Passover holiday. The Soviet government promised in October that a Jewish memorial monument would be erected at Babi Yar, a valley near Kiev where many thousands of Soviet Jews had been butchered by the Nazis during World War II. Previously, various Soviet writers, particularly Yevgeni Yevtushenko, had asked why no monument existed to commemorate this wartime massacre. (See also SOVIET LITERATURE.)

ELLSWORTH RAYMOND
Advisor in Charge of Russian Area Studies, New York University

UNIONS, Labor. See LABOR.

PIX

GAMAL ABDEL NASSER, president of the United Arab Republic (Egypt), was reelected on March 15, 1965, to his third six-year term, polling a record 99.999 percent of the popular vote. In October, in the wake of internal disturbances, a failing economic situation, and a series of diplomatic setbacks, Nasser replaced Prime Minister Aly Sabry with the former vice president and minister of the interior, Zakaria Mohieddin, and initiated a new campaign against subversive activities.

Nasser was born in Beni Mir, Upper Egypt, on Jan. 5, 1918. In 1938, at the age of 20, he began a career in the army, and by 1952 was one of the leaders of the military junta that deposed King Faruk. Nasser assumed the premiership in 1954 and proclaimed himself president of the Republic of Egypt in 1956. He was reelected in 1958. One of Nasser's chief goals was to bring about a union of the nations of the Arab world. A union of Syria and Egypt, called the United Arab Republic, lasted from 1958 until 1961. A proposal to unite Egypt and Iraq, discussed in 1963–64, was shelved in 1965.

UNITED ARAB REPUBLIC

The year 1965 was a difficult one for the United Arab Republic (Egypt) and for its president, Gamal Abdel Nasser. Internally, the government showed more instability than it had for a decade. The Communists reasserted themselves, and the outlawed extremist Muslim Brotherhood came into the open with attempts to assassinate Nasser. An overhaul of the government itself was initiated in October.

Egypt's relations with the United States, West Germany, Iran, and Pakistan were clouded at times. Within the Arab bloc, a serious quarrel erupted between Egypt and Tunisia over the question of Israel. Also, Egypt was forced to admit that its three-year support of the republican forces in the Yemeni civil war had been a failure, and to agree to withdraw its aid.

Government. In January, Nasser was nominated for a third presidential term of six years, and in the election of March 15, only 65 of the 6,950,163 valid ballots were cast against him. In the same week, exiled former King Faruk died of a heart attack in Italy. His body was returned to Cairo for burial. (See NECROLOGY.)

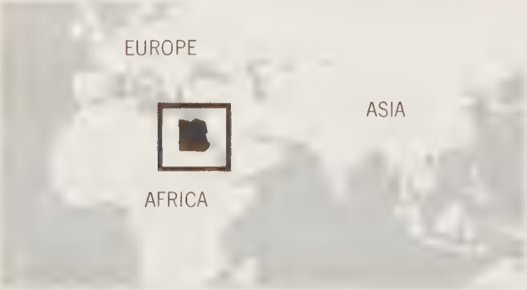
On September 29, Nasser dismissed the government of the somewhat pro-Communist premier, Aly Sabry. Three days later he appointed the more conservative Zakaria Mohieddin as premier. Mohieddin, who formerly had been minister of the interior (1953–62) and vice president (1961–64), immediately began to remove some of the oppressive measures of the previous government and to clamp down on subversive activities within the country.

The activities of opposition groups during the year indicated a feeling of unrest in Egypt. Egyptian Communists attempted to form a political party, but were forced to give up an open organization for membership in Nasser's official party, the Arab Socialist Union. It is estimated that there are about 600 Communists and 2,000 closely aligned fellow travelers in the Arab Socialist Union.

The Muslim Brotherhood maintained its clandestine organization in Egypt and made several abortive attempts on Nasser's life in July and August. The resulting arrests—perhaps 6,000—indicated how widespread the organization had become and how seriously the government viewed its activities.

The War in Yemen. No other single event has shaken the Nasser regime as much as its failure to destroy royalist opposition forces in Yemen. By 1965 this effort had come to a stalemate. On August 24, Saudi Arabia's King Faisal and President Nasser met in Jeddah and initialed their third agreement to end the fighting in Yemen. Although Egypt undertook to remove its troops from Yemen by the fall of 1966, there remained some question as to whether the withdrawal would take place. (See YEMEN.)

UNITED ARAB REPUBLIC · Information Highlights



Area: 386,100 square miles.

Population: 28,900,000 (July 1, 1964, est.).

Chief Cities (1962 est.): Cairo, the capital, 3,518,200; Alexandria, 1,587,700; Giza, 276,200; Port Said, 256,100.

Government: *President*—Gamal Abdel Nasser (assumed office 1956; elected 1958); *Premier*—Zakaria Mohieddin (appointed Oct. 3, 1965); *Parliament*—National Assembly, 350 members.

Religious Faiths: Muslims, 93% of population; Christians, 6%; others, 1%.

Education: *Literacy rate* (1960)—26% of population aged 15 and over. *Total school enrollment* (1962)—3,691,721 (primary 2,909,996; secondary, 482,408; teacher-training, 26,760; technical, 129,306; higher, 143,251).

Finance (1964 est.): *Revenues*, $1,152,000,000; *expenditures*, $1,100,000,000; *public debt* (1963), $1,355,000,000; *monetary unit*, Egyptian pound (0.4348 pound equals U.S.$1).

National Income (1960): $3,266,000,000; average annual income per person, $126.

Economic Indexes (1964): *Industrial production* (1961), 167 (1958 = 100); *agricultural production*, 141 (1956–57 = 100); *cost of living*, 103 (1958 = 100).

Manufacturing (metric tons, 1964): Cement, 2,384,000; wheat flour (1961), 1,989,000; gasoline (1963), 714,000; sugar, 400,000; crude steel, 249,000; meat (1963), 225,000; cotton yarn, 131,280.

Crops (metric tons, 1964): Maize, 1,676,000 (ranks 15th among world producers); cottonseed, 952,000 (rank 5th); citrus fruits, 428,000 (rank 10th); rice, 2,035,000; wheat, 1,600,000; dates (1963), 440,300; potatoes (1963), 420,000; grapes (1963), 105,000.

Minerals (metric tons, 1964): Salt, 675,000 (ranks 18th among world producers); gypsum, 470,000 (rank, 18th); phosphate, 600,000; iron ore, 447,000; kaolin, 62,796; manganese, 43,000; crude petroleum, 43,915,000 bbl.

Foreign Trade (1964): *Exports*, $539,000,000 (chief exports: cotton, $268,180,000; rice, $69,460,000); *imports*, $953,000,000 (chief imports, 1963: wheat, unmilled, $72,266,000; whole meal and flour, $69,276,000; crude petroleum, $62,813,000). *Chief trading partners* (1963): U.S. (took 4% of exports, supplied 27% of imports); USSR (took 19% of exports, supplied 5% of imports); Greece (took 5% of exports, supplied 10% of imports).

Transportation: *Roads* (1964), 29,627 miles (5,862 paved); *motor vehicles* (1964), 112,284 (automobiles, 89,854); *state railways* (1963), 2,945 miles; *merchant vessels* (1964), 45 (201,000 gross registered tons); *national airline*, United Arab Airlines; *principal airports*, Alexandria, Cairo, Luxor, Mersa Matruh.

Communications: *Telephones* (1964): 264,400; *television stations* (1964), 20; *television sets* (1964), 250,000; *radios* (1963), 1,980,000; *newspapers* (1962), 33.

Foreign Relations. The UAR's relations with the United States changed markedly during 1965. In January–February, in response to the burning of the John F. Kennedy Memorial Library in Cairo in November 1964, the U.S. House of Representatives voted to suspend further aid to Egypt unless the U.S. president found such aid to be "in the national interest." By June 1965, diplomatic relations between the two countries had improved, and the United States released more than $37 million in suspended food shipments to Egypt. Relations again became strained when, on July 21, Mustafa Amin, editor of the leading Egyptian newspaper, *Al Akhbar,* was arrested and accused of spying for the United States. But in November the Egyptian government initiated a turn for the better by purchasing $6 million worth of corn from the United States and paying for the shipment in dollars.

The visit of East German leader Walter Ulbricht to Egypt in late February touched off a crisis in the UAR's relations with West Germany. Ulbricht's visit ultimately resulted in a diplomatic break between Cairo and Bonn. (See also GERMANY.)

The UAR continued to be a leading member of the nonaligned, or neutralist, bloc. Relations with both Pakistan and India were complicated by the Pakistani-Indian war over Kashmir in September. The UAR's relations with Iran deteriorated when the shah of Iran, during a television interview in London, accused Nasser of "trying to bring down other Middle Eastern governments."

Arab Unity. The year 1965 was not a propitious one for Egyptian efforts to unify the Arab world. Nasser's costly support of republican elements in the civil war in Yemen was a failure. A serious quarrel with Tunisia was precipitated by Tunisian President Habib Bourguiba's suggestion on March 11 that some sort of rapprochement be effected between Israel and the Arab states. The result was rioting and demonstrations in several Arab capitals and a certain degree of censure of Bourguiba by Arab leaders, although Libya, Morocco, and Saudi Arabia remained silent, presumably in tacit support of Bourguiba's proposal. By late summer, Nasser himself admitted that it would be some years before the Arabs would be prepared to attack Israel.

The friendly regime of Ahmed Ben Bella in Algeria was overthrown on June 19, leaving Nasser even more isolated than before. Egypt did make some effort to improve relations with the new Algerian government of Col. Houari Boumedienne.

In July, plans for incorporating the UAR and Iraq were quietly dropped.

Economy. In spite of increased industrialization and more efficient agricultural methods, the Egyptian economy continued to deteriorate in 1965.

With an annual population growth of nearly 3%, Egypt faces a serious shortage of consumer goods. Commercial imports have been reduced drastically. Foreign exchange and gold reserves are in extremely limited supply.

A government decree in July abolished most installment buying and coupled rigid price controls with a 20% increase in the price of most home appliances. The official cost-of-living index increased 14% between February 1964 and February 1965, and retail prices climbed some 30% between February 1963 and February 1965. In June the government instituted a system of forced savings.

CARL LEIDEN
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UNITED CHURCH OF CANADA

The United Church of Canada, a union of Congregational, Methodist, and Presbyterian churches, celebrated its 40th anniversary in 1965. Since its formation in 1925, membership rose from 609,729 to 1,063,951 in 1964, and donations increased from $16,968,243 to $61,437,861.

In 1965 the United Church had 5,488 congregations organized into 2,683 pastoral charges, with 3,396 ordained ministers, 180 laymen serving congregations, 185 deaconesses, and nearly 100 other professional workers. Of its 4,922 Sunday Schools, 90% follow the Bible Study curriculum introduced in 1964.

The United Church maintains four universities, eight theological colleges, a training college for laymen, and several residential colleges. It also operates 10 frontier hospitals, 24 senior citizen homes, and numerous clinical and guidance centers. An ecumenical center was opened in Montreal to encourage dialogue between French and English, and Roman Catholics and Protestants.

ERNEST E. LONG
Secretary of the General Council

UNITED CHURCH OF CHRIST

In 1965 the United Church of Christ, a union of Congregational Christian churches and the Evangelical and Reformed Church, had over 2 million members in nearly 7,000 churches. This year the church placed its emphasis on meeting problems of increased urbanization and of full human rights for all.

Its General Synod continued the United Church Committee for Racial Justice Now, and established a task force to coordinate programs for an all-out attack on poverty. The Office of Communication completed a 13-week television series called *Tangled World.* This production, to be released by the Broadcasting and Film Commission of the National Council of Churches, explored the ethical problems of modern man's relation to his environment.

The United Church Board for Homeland Ministries sponsored experimental ministries, including job training centers, a chaplaincy in Las Vegas, Nev., and services to night workers. It continued its work in church extension and in hospitals and homes for the elderly and the orphaned, and conducted a study of its 14 seminaries.

At the Consultation on Church Union, United Church delegates and representatives of the Methodist, Presbyterian, Episcopal, Disciples of Christ, and Evangelical United Brethren churches drew up a plan of union. This plan will be submitted to all local United Church congregations for study prior to adoption by the Consultation.

In 1965 the United Church Board for World Ministries had 507 missionaries and fraternal workers in 32 countries. They were engaged in relief, rehabilitation, social service, education, and evangelical work. Members of the board met with agencies of both the United Presbyterian Church of the U.S.A. and the Disciples of Christ to discuss ways of cooperating in mission work abroad.

The United Church launched "Breakthrough," a program to explain the national and world missionary enterprise. It includes an "Every Church Visitation" program conducted by United Church leaders.

BEN MOHR HERBSTER
President, United Church of Christ

UNITED KINGDOM. See GREAT BRITAIN.

UNITED NATIONS

UNITED NATIONS

The United Nations celebrated its 20th anniversary by holding commemorative meetings June 25 and 26 in San Francisco, Calif. The city had witnessed the meeting in 1945 when the original UN Charter was signed, and played host in 1955 to the organization's 10th anniversary celebration. President Lyndon B. Johnson was the principal speaker at the opening of the 1965 celebration.

On Nov. 21, 1963, the United Nations had designated 1965 as "International Cooperation Year," but there was little evidence of increased cooperation among UN members in 1965. The constitutional crisis over the financing of peacekeeping operations that had dominated the United Nations in 1964 and delayed the convening of the 19th session continued through the first eight months of 1965. The "no-vote" 19th session recessed on February 18 after creating a special committee to resolve the crisis. The deadlock between the Soviet Union and the United States was not resolved until August 31, when a consensus was reached not to force the issue over the implementation of Article 19 of the UN Charter.

In addition to this constitutional issue, the United Nations was faced in September with the conflict that broke out between India and Pakistan, and in November with the situation resulting from the unilateral declaration of independence by Rhodesia. The United Nations also was concerned with the widening of the war in Vietnam and the civil war in the Dominican Republic.

In an unprecedented action, Pope Paul VI flew to New York on October 4 to address the UN General Assembly. This was the first visit to the Western Hemisphere ever made by a reigning pope. He was greeted at the United Nations by Secretary-General U Thant, Assembly President Amintore Fanfani, U.S. Secretary of State Dean Rusk, and Soviet Foreign Minister Andrei Gromyko. In a speech delivered in French to some 3,000 UN members and their guests, the pope stressed that the United Nations represents "the obligatory road of modern civilization and world peace." About 500 dignitaries were later presented to the pontiff.

By continuing the UN Force in Cyprus, the United Nations recognized the importance of its role in promoting the peaceful settlement of international disputes. The organization continued its efforts to grapple with the more difficult long-range problems of the developing nations.

The 20th session adopted an international convention on the elimination of all forms of racial discrimination—the first human rights convention of the United Nations to include provisions for implementation. It ratified the first formal amendments to the UN Charter, enlarging the membership of the Security and the Economic and Social councils. By the end of 1965 the United Nations appeared to

WIDE WORLD

UNITED NATIONS AFRICAN DELEGATES walk out in protest against Great Britain's Rhodesian policy as British Prime Minister Wilson addresses the Assembly on Dec. 16, 1965.

have gained strength from its survival of the constitutional crisis of 1964–65.

Because of its objections to the seating of Malaysia on the UN Security Council, Indonesia became the first state ever to withdraw from UN membership. On January 21 the Indonesian ambassador to the United Nations, Lambertus Palar, handed UN Secretary-General Thant a formal letter of withdrawal. At the same time, Indonesia declared its intention to remain in the World Health Organization (WHO) and other UN agencies it felt might be beneficial to the Indonesian people.

The withdrawal of Indonesia reduced UN membership to 114. With the addition on September 21 of three new members—The Gambia, the Maldive Islands, and Singapore—total membership rose to 117.

The principal activities of the United Nations in its 20th year are discussed under the following headings: (1) General Assembly; (2) Security Council; (3) Economic and Social Council.

GENERAL ASSEMBLY

The 19th session of the Assembly resumed its work on Jan. 18, 1965, continuing to function under the "no-vote" agreement that had limited its activities in 1964. The basic issue was the constitutional question of the obligation of states to pay for the operations of the UN Emergency Force (UNEF) in the Middle East and the UN Operation in the Congo (ONUC). The United States contended that states had an obligation to pay their share of these peacekeeping operations. It argued that if they failed to do so, the Assembly should invoke Article 19 of the Charter, taking away the vote of states that are over two years in arrears on budget assessments. The Soviet Union and France held that these particular peacekeeping operations were not part of the regular budget, and that Article 19 was therefore not applicable.

The 19th session, which began late in December 1964, operated on a consensus basis. Efforts were made to prevent voting on any question, because a vote would open the possibility of challenging the voting rights of those states in arrears on payments for UNEF and ONUC. It was in this atmosphere that the Assembly resumed its 19th session on January 18.

The Assembly by consensus dealt with certain essential matters such as elections to the Economic and Social Council and other bodies. On February 16 the consensus formula was almost upset by Albania's demand that the Assembly "return to its normal procedure." All the efforts to prevent the issue from being forced appeared on the verge of collapsing, but both factions in the conflict were united at least to prevent the Albanian action from leading the Assembly to a situation that might be irreversible. The meeting was adjourned without voting on the Albanian proposal. On February 18 the Assembly met again and voted on the Albanian demand with the understanding that it was only a procedural question, and that there would be no challenge on the right to vote of states that were in arrears.

The Assembly was then able to continue operating on a consensus basis. It created a special committee to review all aspects of peacekeeping operations and to report to the Assembly with recommendations by June 15. Also by consensus, the Assembly made interim financial arrangements and authorizations for 1965, and provided for UN supervision of the elections to be held in the Cook Islands.

Between April 22 and June 15, the Special Committee on Peacekeeping Operations held 14 meetings but was unable to break the deadlock. The 19th session of the Assembly was unable to reconvene. Finally, on August 16, the new U.S. representative to the United Nations, Arthur J. Goldberg, who had assumed the post after the death of Adlai E. Stevenson, told the Special Committee that for the sake of the preservation of the organization, the United States would not insist on the application of Article 19, even though it felt that the article applied. As a consequence, on August 31, the Special Committee was able to arrive at a consensus that provided: (1) that the General Assembly will carry on its work normally in accordance with its rules of procedure; (2) that the question of the applicability of Article 19 of the Charter will not be raised with regard to the UN Emergency Force in the Middle East and the UN Operation in the Congo; and (3) that the financial difficulties of the organization should be solved through voluntary contributions by member states, with the highly developed countries making substantial contributions. The 19th session resumed on September 1, approved the consensus of the Special Committee, and adjourned.

The 20th session of the Assembly met from Sep-

WIDE WORLD

SECRETARY-GENERAL U THANT (left) and Assembly President Amintore Fanfani shared the rostrum in November.

tember 21 to December 21. Its major achievements are summarized below.

Political and Security Questions. On November 19 the Assembly recommended (93–0, with 5 abstentions) that all states, and particularly the Eighteen-Nation Committee on Disarmament, give urgent attention to the drafting of a treaty on the nonproliferation of nuclear weapons. Three other disarmament resolutions were adopted on December 3. One (adopted 102–0, with 6 abstentions), urged the Eighteen-Nation Committee to continue efforts toward general and complete disarmament. A second (adopted 92–1, with 14 abstentions), stressed the urgent need for the suspension of nuclear and thermonuclear tests, and the third (adopted 105–0, with 2 abstentions), reaffirmed the principle (originally adopted in 1961) that the continent of Africa should be a nuclear-free zone as a practical step toward the prevention of the spread of nuclear weapons.

On December 15 the Assembly passed two resolutions on the apartheid policies of South Africa. One resolution (adopted 80–2, with 16 abstentions), continued and enlarged the special committee on the policies of apartheid of South Africa, and condemned South Africa for its refusal to comply with earlier resolutions of the Assembly. The other (adopted 95–1, with 1 abstention) established a voluntary UN trust fund to give assistance to refugees and the families of political prisoners of South Africa.

On December 18 the Assembly voted (43–26, with 22 abstentions) to deplore the continued violation of fundamental rights and freedoms of the people of Tibet, and called (47–5, with 54 abstentions) on all states to respect the independence and territorial integrity of the Republic of Cyprus. On December 21 the Assembly reaffirmed (61–13, with 34 abstentions) its previous resolutions urging the unification of Korea.

Economic and Financial Questions. On November 22 the Assembly established a UN Development Program by consolidating the Special Fund and the Expanded Program of Technical Assistance, the new program to take effect on Jan. 1, 1966. On December 8 the Assembly took steps to establish a UN Capital Development Fund and unanimously resolved to promote a campaign for universal literacy. On December 20 the Assembly adopted resolutions providing for scientific and technological assistance to developing countries, the development and utilization of human resources, the UN Development Decade, the continuing work of the UN Conference on Trade and Development, activities in the field of industrial development, the role of the United Nations in training technical personnel to speed up the industrialization of the developing countries, the transfer of technology, and the confirmation of the allocation of funds for the Expanded Program of Technical Assistance.

On December 20 it also passed resolutions on transit trade of landlocked countries (81–0, with 12 abstentions), financing economic development (78–1, with 17 abstentions), the accelerated flow of capital and technical assistance to developing countries (83–0, with 15 abstentions), the conversion to peaceful needs of the resources released by disarmament (101–1), and the continuation of the World Food Program (93–0, with 10 abstentions).

Social, Humanitarian, and Cultural Questions. On November 1 the Assembly unanimously adopted resolutions to implement declarations on the elimination of all forms of racial discrimination and on the elimination of all forms of religious intolerance. At the same time it requested that member nations adopt certain principles on the consent to marriage, minimum age for marriage, and the registration of marriages.

The Assembly on December 7 passed resolutions to dedicate UN Day 1966 to the cause of refugees, and to provide assistance to refugees in Africa (89–9).

On December 16 the Assembly unanimously passed resolutions on UN assistance for improving the status of women; advisory services in the field of human rights; progress on a draft convention and declaration on freedom of information; consideration of the creation of the post of UN high commissioner for human rights; progress on the Draft International Covenants on Human Rights; and plans for the International Year for Human Rights in 1968.

On December 21 the Assembly adopted (106–0, with 1 abstention) an international convention on the elimination of all forms of racial discrimination, establishing new precedents in the international promotion of human rights. It provided for a commission to conciliate human rights complaints, and made it possible for individuals to make petitions of complaints. Before this resolution, only states could

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AMINTORE FANFANI of Italy was elected president of the UN General Assembly on Sept. 21, 1965, succeeding Alex Quaison-Sackey of Ghana. As Assembly president during Pope Paul VI's historic visit to the United Nations in October, Fanfani presented the pontiff to the UN delegates and guests.

Fanfani was appointed Italian foreign minister on March 5, 1965. He resigned the post on December 28 after he had become involved in alleged "peace feelers" from the North Vietnamese government to the U.S. government. His reason for resigning was that the affair had "cast doubts on the conduct of the foreign minister." (See also *Italy.*)

Fanfani was born in Pieve Santo Stefano, Arezzo, Italy, on Feb. 6, 1908. A specialist in economic history, he taught at several Italian universities. He became a member of the central committee of the Christian Democratic party in 1945. After holding a number of cabinet posts in the governments of Premier Alcide de Gasperi, he was prime minister in 1958–59 and from 1960 to 1963.

NEW YORK TIMES

POPE PAUL VI, in historic speech to UN General Assembly on October 4, reminds organization that it is for many "the last hope of concord and peace."

complain of human rights violations.

Decolonization Questions. Throughout 1965 the Special Committee of 24 continued its active efforts to speed the implementation of the 1960 declaration on the elimination of colonialism. It adopted three resolutions (October 12, November 5, and November 11) relating to Rhodesia. On November 5 the Assembly urged (90–11, with 10 abstentions) that Britain abolish the state of emergency in Aden and cease all repressive actions against the people there. On December 16 the Assembly decided to establish a voluntary economic development fund to aid Basutoland, Bechuanaland, and Swaziland. It declared, after the elections in the Cook Islands, that they had achieved full internal government. The Assembly invited the United Kingdom and Argentina to seek a peaceful settlement of their dispute over the Falkland Islands (Malvinas). It reaffirmed the right of Mauritius to freedom and independence from Britain, and requested Spain to set an early date for the independence of Equatorial Guinea. It also requested the United Kingdom to repeal all discriminatory laws and to establish a "one-man, one-vote" system in Fiji.

The Assembly reaffirmed (91–0, with 10 abstentions) on December 16 the inalienable right to decide their constitutional status of the peoples of American Samoa, Antigua, Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Cocos (Keeling) Islands, Dominica, Gilbert and Ellice Islands, Grenada, Guam, Montserrat, New Hebrides, Niue, Papua, Pitcairn, St. Helena, St. Kitts-Nevis-Anguilla, St. Lucia, St. Vincent, Seychelles, Solomon Islands, Tokelau Islands, Turks and Caicos Islands, and the U.S. Virgin Islands. The resolution asked the administering powers of these territories to implement the declaration eliminating colonialism.

Also on December 16, in response to the recommendations of the Special Committee of 24, the Assembly, by a vote of 96–0, with 11 abstentions, urged Britain and Spain to discuss the status of Gibraltar; requested (81–0, with 19 abstentions) Britain to end the state of emergency in British Guiana; and requested (100–2, with 4 abstentions) Spain to end colonialism in Ifni and Spanish Sahara.

On December 17 the Assembly called upon the United Kingdom to take steps to remove British troops from Muscat and Oman, and condemned South Africa's policies on South West Africa. The Assembly, on December 21, condemned (66–26, with 1 abstention) Portugal's colonial policies, urging all states to break off trade and diplomatic relations with Portugal. It asked (84–0, with 25 abstentions) the Australian-appointed administrator of Nauru to establish a legislative council there by Jan. 31, 1966, and to arrange for the independence of this Pacific island by Jan. 31, 1968. It also asked Australia, as the administering authority, to implement the declaration on the elimination of colonialism with respect to the Trust Territory of New Guinea and the territory of Papua.

Administrative and Budgetary Questions. On December 21 the Assembly approved a budget of $108,472,800 for 1965 and of $121,567,420 for 1966, and maintained the working capital fund at $40 million for 1966. Also on December 21, the Assembly approved funds for UNEF of $18,911,000 for 1965 and $15 million for 1966. The Assembly also approved a number of technical administrative resolutions, ranging from a revision of the scale of assessments to appointments to the Board of Auditors.

Legal Questions. On November 5 the Assembly adopted (82–0, with 21 abstentions) a resolution on updating the nine general multilateral treaties concluded under the auspices of the League of Nations. On December 20 it adopted a resolution on assistance to promote the teaching, study, dissemination, and wider appreciation of international law. In the same meeting it unanimously adopted resolutions on the development of a draft declaration on the right of asylum, consideration of steps for the development of private international law (with a particular view to promoting international trade), and the consideration of principles of international law concerning friendly relations and cooperation among states, in accordance with the UN Charter.

Charter Amendments. The amendments to Articles 23, 27, and 61 of the UN Charter, which had been recommended for ratification on Dec. 17, 1963, came into force on Aug. 31, 1965, after having received the necessary number of ratifications. These amendments increased the membership of the Security Council from 11 to 15, the membership of the Economic and Social Council from 18 to 27, and altered the voting majority required in the Security Council from 7 to 9. The three amendments took effect on Jan. 1, 1966. As a result of these amendments the Assembly on December 20 unanimously recom-

UPI UPI A.F.P. FROM PICTORIAL

INDIAN-PAKISTANI DISPUTE OVER KASHMIR is discussed in September by India's Ambassador G. Parthasarathi (*l*). and Security Council (*center*), and in December by Pakistan's President Ayub Khan (*r.*) in General Assembly speech.

ORGANIZATION OF THE UNITED NATIONS

THE SECRETARIAT

Secretary-General: U Thant

THE GENERAL ASSEMBLY

President: Alex Quaison-Sackey (Ghana), 19th session; Amintore Fanfani (Italy), 20th session.

Afghanistan
Albania
Algeria
Argentina
Australia
Austria
Belgium
Belorussian SSR
Bolivia
Brazil
Bulgaria
Burma
Burundi
Cambodia
Cameroon
Canada
Central African Republic
Ceylon
Chad
Chile
China
Colombia
Congo (Léopoldville)
Congo (Brazzaville)
Costa Rica
Cuba
Cyprus
Czechoslovakia
Dahomey
Denmark
Dominican Republic
Ecuador
El Salvador
Ethiopia
Finland
France
Gabon
Gambia
Ghana
Greece
Guatemala
Guinea
Haiti
Honduras
Hungary
Iceland
India
Iran
Iraq
Ireland
Israel
Italy
Ivory Coast
Jamaica
Japan
Jordan
Kenya
Kuwait
Laos
Lebanon
Liberia
Libya
Luxembourg
Malagasy Republic
Malawi
Malaysia
Maldive Islands
Mali
Malta
Mauritania
Mexico
Mongolian People's Republic
Morocco
Nepal
Netherlands
New Zealand
Nicaragua
Niger
Nigeria
Norway
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Rumania
Rwanda
Saudi Arabia
Senegal
Sierra Leone
Singapore
Somalia
South Africa
Spain
Sudan
Sweden
Syria
Tanzania
Thailand
Togo
Trinidad and Tobago
Tunisia
Turkey
Uganda
Ukrainian SSR
USSR
United Arab Republic
United Kingdom
United States
Upper Volta
Uruguay
Venezuela
Yemen
Yugoslavia
Zambia

COMMITTEES

General: Composed of 25 members as follows: General Assembly president; the 17 General Assembly vice presidents (chiefs of delegation or their deputies of Burundi, Central African Republic, Chile, China, France, Guatemala, Kuwait, Laos, Malaysia, Morocco, Paraguay, Poland, Sierra Leone, Spain, the USSR, the United Kingdom, and the United States); and the chairmen of the following 7 committees, which are composed of representatives of all member countries:

First (Political and Security): Karoly Csatorday (Hungary).

Special Political: Carlet R. Auguste (Haiti).

Second (Economic and Financial): Pierre-Attilio Forthomme (Belgium).

Third (Social, Humanitarian, and Cultural): Francisco Cuevas Cancino (Mexico).

Fourth (Trusteeship and Non-Self-Governing Territories): Majid Rahnema (Iran).

Fifth (Administrative and Budgetary): Nejib Bouziri (Tunisia).

Sixth (Legal): Abdullah El-Erian (United Arab Republic).

THE SECURITY COUNCIL

(Membership ends on December 31 of the year noted; asterisks indicate permanent membership.)

Argentina (1967)
Bulgaria (1967)
China*
France*
Japan (1967)
Jordan (1966)
Mali (1967)
Netherlands (1966)
New Zealand (1966)
Nigeria (1967)
Uganda (1966)
USSR*
United Kingdom*
United States*
Uruguay (1966)

Military Staff Committee: Chiefs of staff (or their representatives) of China, France, USSR, the United Kingdom, and the United States.

Disarmament Commission: Representatives of all members of the United Nations.

THE ECONOMIC AND SOCIAL COUNCIL

President: Sir Ronald Walker (Australia), 37th session; Akira Matsui (Japan) 38th and 39th sessions, 1965. (Membership ends on December 31 of the year noted.)

Algeria (1966)
Cameroon (1967)
Canada (1967)
Chile (1966)
Czechoslovakia (1968)
Dahomey (1967)
Ecuador (1966)
France (1966)
Gabon (1967)
Greece (1966)
India (1967)
Iran (1968)
Iraq (1966)
Luxembourg (1966)
Morocco (1968)
Pakistan (1967)
Panama (1968)
Peru (1967)
Philippines (1968)
Rumania (1967)
Sierra Leone (1966)
Tanzania (1966)
USSR (1968)
United Kingdom (1968)
United States (1967)
Venezuela (1968)

THE TRUSTEESHIP COUNCIL

President: André Naudy (France), 32nd session, 1965.

Australia[1]
China[2]
France[2]
Liberia[3]
New Zealand[1]
USSR[2]
United Kingdom[1]
United States[1]

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[1] Administers trust territories. [2] Permanent member of the Security Council that does not administer a trust territory. [3] Elected for term ending Dec. 31, 1968.

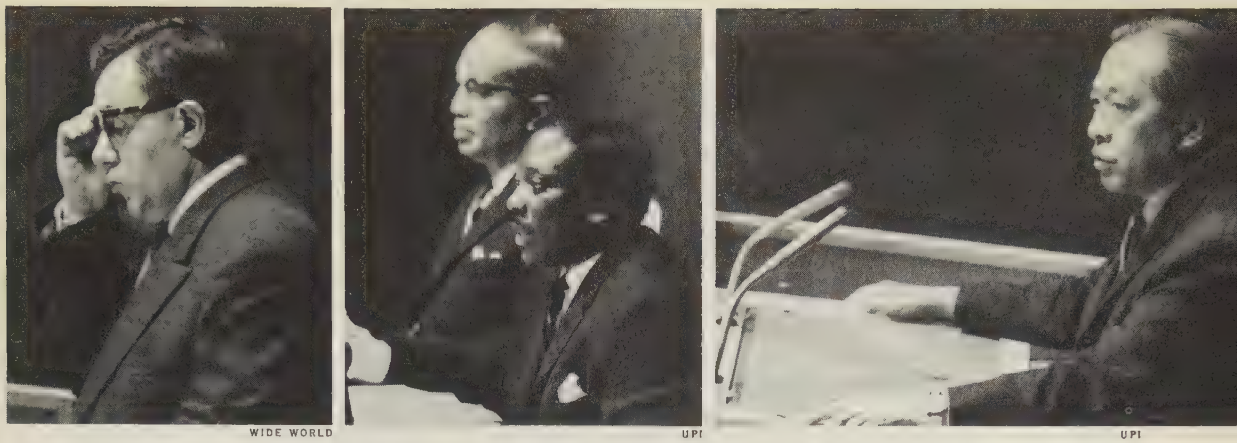
THE INTERNATIONAL COURT OF JUSTICE

President: Sir Percy Spender (Australia); vice president: V.K. Wellington Koo (China). (Justices listed in order of precedence.)

B. Winiarski (Poland)
J. Spiropoulos (Greece)
G. Fitzmaurice (United Kingdom)
M. Koretsky (USSR)
K. Tanaka (Japan)
J.L. Bustamante y Rivero (Peru)
P.C. Jessup (United States)
G. Morelli (Italy)
M. Zafrullah Khan (Pakistan)
L. Padillo Nervo (Mexico)
I. Forster (Senegal)
A. Gros (France)
F. Ammoun (Lebanon)

SPECIALIZED AGENCIES

Food and Agriculture Organization of the United Nations; Intergovernmental Maritime Consultative Organization; International Atomic Energy Agency; International Bank for Reconstruction and Development; International Civil Aviation Organization; International Finance Corporation; International Labor Organization; International Monetary Fund; International Telecommunications Union; United Nations Educational, Scientific and Cultural Organization; Universal Postal Union; World Health Organization; World Meteorological Organization.



WIDE WORLD UPI UPI

GENERAL ASSEMBLY hears Soviet Foreign Minister Gromyko (*l.*) denounce U.S. actions in Vietnam, outgoing President Quaison-Sackey (c.) give farewell speech, and Nationalist Chinese Ambassador Liu oppose Communist China's admission.

mended an amendment to Article 109 of the Charter, changing the Security Council vote requirement for Charter amendments from 7 to 9.

SECURITY COUNCIL

The most serious issues before the Security Council in 1965 were the conflict between India and Pakistan and the unilateral declaration of independence by Rhodesia. The Council also had to deal with a revolution in the Dominican Republic and continuing problems in Cyprus, South Africa, and the Portuguese territories.

India-Pakistan. On August 24, Secretary-General U Thant expressed his concern over increased violations of the cease-fire line that had been established between India and Pakistan in July 1949. As the situation deteriorated and armed conflict between India and Pakistan broke out, the Security Council met on September 4 at the urgent request of the United States. The secretary-general reported to the Council that the cease-fire agreement of 1949 had collapsed. The Security Council unanimously adopted a resolution on September 4 calling upon both India and Pakistan to cease fire and to withdraw to their own sides of the cease-fire line.

The Council met again on September 6 to consider a report from the secretary-general that neither India nor Pakistan had responded to the September 4 resolution. It also heard a report from Gen. Robert H. Nimmo (Australia), the chief military observer, indicating that the conflict was broadening and intensifying. The Council unanimously adopted a resolution calling for a cessation of hostilities and a withdrawal of all forces to the positions they had held on August 5. The secretary-general visited India and Pakistan (September 7–16) and talked with the leaders of the two countries, but was unable to obtain a cease-fire. The Security Council again considered the issue on September 17, and on September 20 adopted a resolution demanding that a cease-fire take effect on September 22, promising that the Council would then help the two states arrive at a political settlement.

On September 21 the secretary-general reported on steps he was taking to supervise a cease-fire line. These included the organization of the UN India-Pakistan Observation Mission (UNIPOM), with an initial team of 100 military observers and supporting staff, at a cost of $1,645,000 for three months. He reported that while he had no reply from Pakistan to the "demand" of the Council, India was willing to agree to the cease-fire if Pakistan would also agree. After a recess in a meeting of the Council on September 22, and discussions between U.S. Ambassador Arthur Goldberg (president of the Council) and the foreign minister of Pakistan, the cease-fire was agreed upon.

UN military observers reported on violations of the September 22 cease-fire, and the Council met in emergency meeting on September 27, adopted a resolution expressing grave concern that the cease-fire agreed to unconditionally by the two states was not holding, and again called upon the parties to withdraw their troops. After the cease-fire had taken effect, fighting broke out again and the issue was again considered by the Council, without action, on October 25, 27, and 28. On November 5 the Council adopted a resolution calling upon India and Pakistan to end violations of the cease-fire and demanding prompt and unconditional execution of a proposal on withdrawal of their forces. (See also ASIA; INDIA; PAKISTAN.)

Rhodesia. The movement of the Rhodesia white minority government of Prime Minister Ian Smith toward a unilateral declaration of independence was of increasing concern to the Security Council in 1965. Following a request by 35 African states that were concerned over the failure of the Smith regime to heed repeated resolutions of the Council and Assembly, the Council took up the question again on April 30 in an effort to prevent parliamentary elections in Rhodesia in May. On May 6 the Council adopted a resolution (7–0, with 4 abstentions) calling on Britain not to accept any unilateral declaration of independence by the minority government of Rhodesia.

The Smith government, however, did make a unilateral declaration of independence on Nov. 11, 1965. On November 12 the Council adopted (10–0, with 1 abstention) a resolution condemning this action and requested that no state recognize or give assistance to the "illegal" regime. It also adopted (10–0, with 1 abstention) a resolution on November 20 calling on states to desist from sending arms, equipment, and military material to the Smith regime and to do their utmost to break all economic relations with Rhodesia, including trade in oil and petroleum products. The African and Asian states had wanted the United Nations to use military force to break the white minority regime, but Britain favored economic sanctions alone. In the face of this implied veto, the Council stopped short of military pressure. (See also COMMONWEALTH OF NATIONS; RHODESIA.)

Dominican Republic. The United States informed the Security Council on April 29 that it had ordered troops to the Dominican Republic on April 28 to protect Americans there and to escort them to safety. The United States explained that it took this action only after Dominican Republic military authorities had announced that they could no longer guarantee the safety of American lives "and that the assistance of U.S. military personnel was required." At about the same time the matter was considered by the Organization of American States (OAS), and on April 29 and 30 the secretary-general of the OAS informed the UN Security Council of its actions.

On April 30, Cuba protested the "illegal action" and the "invasion" of the Dominican Republic by the United States. The Soviet Union on May 1 asked for an urgent meeting of the Council to consider the question of "the armed intervention" of the United States in the "internal affairs" of the Dominican Republic. The matter was considered in 16 meetings between May 3 and 25. A resolution, adopted unanimously on May 14, called for a cease-fire in the Dominican Republic and directed the secretary-general to send a representative to the country. On May 15, Secretary-General U Thant sent his military aide, Maj. Gen. I.J. Rikhye (India), to the Dominican Republic, and named the executive secretary of the Economic Commission for Latin America, José Antonio Mayobre (Venezuela), as his representative.

On May 17, Mayobre arrived in the Dominican Republic, met with leaders of the various factions, and urged a suspension of hostilities to facilitate the work of the Red Cross, a proposal that the Security Council backed in a statement of the Council president on May 19. By May 21, through these efforts and those of the OAS, a 24-hour suspension of hostilities was agreed upon. On May 22 the Council adopted a resolution requesting that the suspension be extended into a cease-fire, which took effect.

At eight meetings between June 3 and 21 the Security Council again considered the situation at the request of the Soviet Union. Four meetings were held between June 21 and 26, following a letter of June 14 from the foreign minister of the constitutionalist government in the Dominican Republic protesting the continued intervention of U.S. and inter-American forces. These discussions resulted in no action by the Council. (See also DOMINICAN REPUBLIC; LATIN AMERICA.)

ARTHUR J. GOLDBERG (r.), new U.S. ambassador to United Nations, confers in September with U.S. delegation.

UPI

Cyprus. The secretary-general on March 11 recommended that the Council continue the UN Peacekeeping Force in Cyprus (UNFICYP) for three more months in the hope of stabilizing the situation there. After three days of discussion, the Council on March 19 extended the mandate for UNFICYP for three months. On June 10 the secretary-general stated that while there was some easing of the tension on Cyprus, he felt that without the continued presence of UNFICYP, fighting between the two communities would break out again. He pointed out that it would be advisable to extend the mandate of the force for another six months. The Council unanimously extended the mandate of the force to Dec. 26, 1965.

In July and again in November, Turkey and Cyprus requested meetings of the Security Council to deal with the situation in Cyprus. On December 17, after the secretary-general reported that if the force were not continued the result might be "disastrous," the Security Council extended the mandate of UNFICYP for three more months, to March 26, 1966. (See also CYPRUS.)

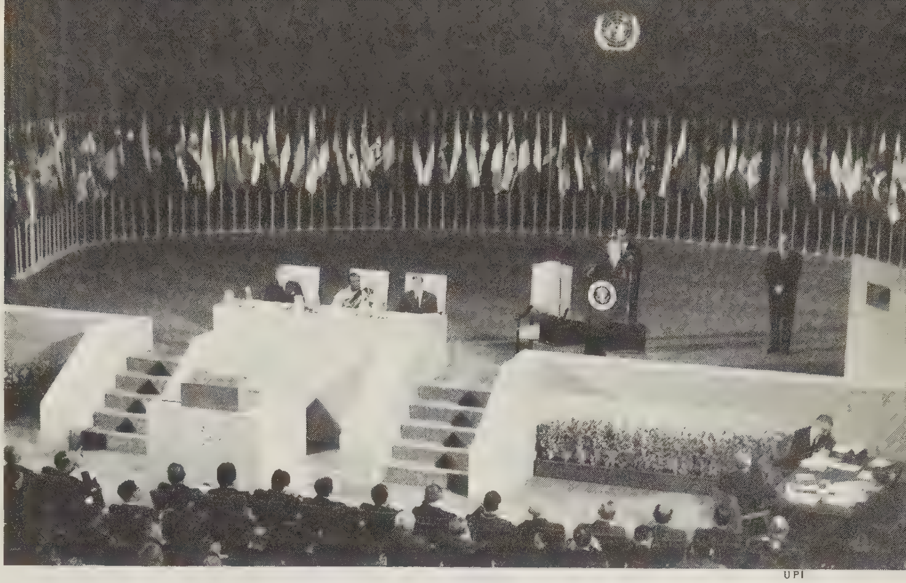
Portuguese Territories. On July 28, 32 African states, pointing out that the Council had passed a resolution in July 1963 deploring the situation in the Portuguese-administered territories as a serious disturbance to the peace and asking Portugal to speed steps aimed at granting independence, argued that Portugal had not complied with the resolution and that the Council should again deal with the problem. After eight meetings on the question the Council adopted (17–0, with 4 abstentions) a resolution confirming its previous resolution asking Portugal to recognize the right of the peoples in these territories to achieve self-determination. The resolution also requested that all states refrain from offering Portugal any assistance "which would enable it to continue its repression" of the peoples in these areas. (See also PORTUGAL.)

Senegal-Portugal. On May 7, Senegal requested a meeting of the Council, arguing that Portugal had continued to violate its airspace, claiming that there had been 13 violations since the Council considered the question in April 1963; it further contended that Portugal had attacked border villages. On May 19 the Council unanimously adopted a resolution deploring the incursions by Portuguese military units, and asked Portugal to take "all effective and necessary steps" to prevent violations. (See SENEGAL.)

Yemen. On August 25 the secretary-general congratulated the UAR and Saudi Arabia for signing an agreement concerning peace in Yemen. During much of this dispute the presence of the UN peacekeeping forces in Yemen had helped to reduce tensions while the two countries moved toward a political settlement. (See also YEMEN.)

ECONOMIC AND SOCIAL COUNCIL

The Economic and Social Council, meeting on March 1 and 8, concluded the work of the resumed 37th session. It considered the work program for 1965, and elected members of the sessional committees and functional commissions. The Commission on International Commodity Trade was abolished and its functions transferred to the Committee on Commodities of the new Trade and Development Board.



PRESIDENT JOHNSON speaks on June 26, 1965, in the San Francisco (Calif.) Opera House at the opening ceremonies of a special meeting commemorating the 20th anniversary of the signing of the United Nations Charter.

UPI

The 38th session (March 22–26) reviewed and appraised the work of the Council, considered the problem of water desalination in developing countries, and noted reports from the International Bank and the International Monetary Fund.

The 39th session (June 30–July 31) evaluated the progress made in the first five years of the UN Development Decade, urged speedy implementation of the recommendations of the UN Conference on Trade and Development, and endorsed a long-range program to deal with the problem of the growth of the world's population and its effect on development. It recommended a continuation of the World Food Program, called for a world land reform conference in 1966, and endorsed recommendations on accelerating progress in the broad field of water desalination and its practical application to arid areas. It approved proposals by governments and international bodies on such crucial problems as the development and use of natural resources, the improvement of food supplies, world health, transportation and housing, and urban planning.

A resumed 39th session (November 22–23) elected 37 members to the governing council of the new UN Development Program, which had been created by the General Assembly by combining the Special Fund and the Expanded Program of Technical Assistance. It also adopted a resolution to continue the World Food Program.

The 39th session resumed again and concluded on December 21. It elected new members and reviewed the work of the intergovernmental committee of the World Food Program, enlarged the committee on industrial development, and reviewed the work program for 1966.

TRUSTEESHIP COUNCIL

The 32nd session of the Trusteeship Council, held May 28 to June 30, examined the annual reports of the three remaining trust territories—the Trust Territory of the Pacific Islands, New Guinea, and Nauru. It also considered the report of a visiting mission to New Guinea and Nauru, and petitions from the Trust Territory of the Pacific Islands. (See also PACIFIC ISLANDS.)

INTERNATIONAL COURT OF JUSTICE

In March and April the International Court of Justice resumed public hearings in the South West Africa cases—*Ethiopia* v. *South Africa* and *Liberia* v. *South Africa*. (See also INTERNATIONAL LAW; SOUTH AFRICA.)

(For information on the specialized agencies, see WORLD HEALTH ORGANIZATION and UNITED NATIONS EDUCATIONAL, SCIENTIFIC, AND CULTURAL ORGANIZATION.)

THOMAS HOVET, JR.
Professor of International Relations
Graduate School of Arts and Science
New York University

UNITED NATIONS CHILDREN'S FUND. See CHILD WELFARE—*International Programs.*

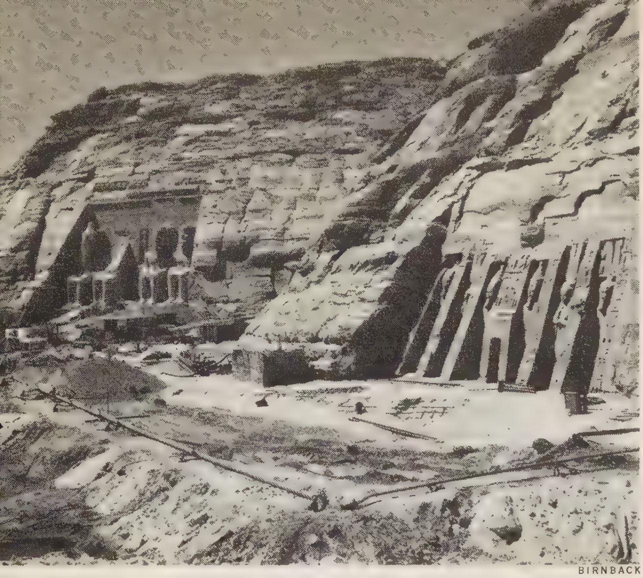
UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)

UNESCO, a specialized agency of the United Nations, with headquarters in Paris, France, had a membership of 120 countries at the end of 1965. Its policies are formulated by a biennial general conference of representatives from member nations and by an executive board of 30 members, responsible to their respective governments. UNESCO's activities are carried out by an international secretariat, by experts in the field, and by national commissions. Director-general of the international secretariat is René Maheu of France (elected Nov. 14, 1962). UNESCO's budget for 1965 and 1966 was set by the 1964 general conference at $48,875,000.

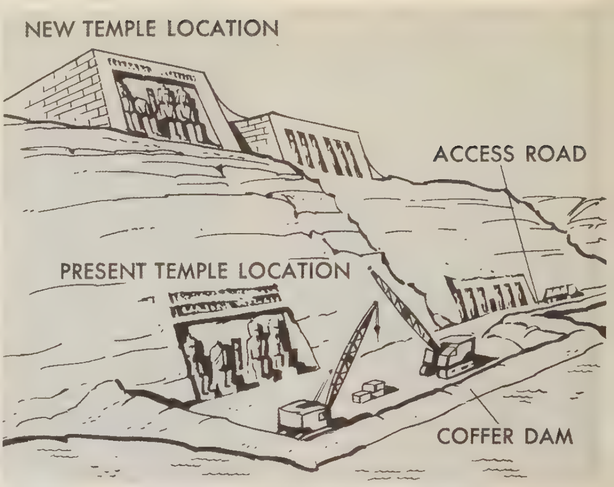
Education. In 1965, UNESCO sent educational planning missions to Algeria, Tanzania, Iran, Pakistan, and Ecuador, and participated in 15 missions organized by the World Bank to help nations plan for educational development. In addition, UNESCO helped train teachers, write textbooks, and conduct school building research in Asia, Africa, and Latin America. It is involved in efforts to educate 250 million children in these continents by 1980.

UNESCO estimates that about two fifths of the world's population is illiterate. In 1965, UNESCO started planning pilot mass literacy projects in eight countries, part of its work to eliminate illiteracy on a worldwide scale. At the first World Congress of Ministers of Education on the Eradication of Illiteracy, held at Teheran in September, 88 nations agreed that national development plans should include literacy campaigns.

Science and Technology. UNESCO continued in 1965 to help developing countries establish their own na-



BIRNBACK



TEMPLES OF RAMESES at Abu Simbel, Egypt, are being raised, with UNESCO help, to a new location above the level of the lake that will form behind the Aswân Dam. Sketch above shows present and future temple sites. A coffer dam (*outlined by pipes, top left*) will retain the lake waters until the work is completed. Temples are buried in sand (*below left*) to protect them while coffer dam is built.

BIRNBACK

HEAD OF RAMESES II (*below*), who built the temples about 1250 B.C., is cut into sections for moving. Temples will be moved piece by piece and reconstructed at new site.

WIDE WORLD

tional science programs. On January 1, UNESCO launched the International Hydrological Decade, a ten-year program to step up scientific research to meet the world water shortage. During the year UNESCO also sponsored international interdisciplinary meetings in such fields as cell biology and brain research, and continued to work in seismology, with particular emphasis on training sufficient experts to develop a worldwide warning system. The International Indian Ocean Expedition ended in 1965.

Social Sciences. As part of an effort to increase international understanding, UNESCO continued its research on racial problems, urbanization, and the effects of education, science, and culture on economic development.

Culture. UNESCO'S program to save the Egyptian monuments in the Nubian Valley, threatened by the Aswân High Dam Lake, drew to a close in 1965. The temples of Ramses II at Abu Simbel were cut into 30-ton blocks and lifted above the rising waters.

UNESCO's two copyright conventions—one to protect authors and literary materials, the other to protect performers, broadcasters, and recording companies—were extended in 1965 to a total of 52 and 30 countries, respectively. The number of countries participating in the free-flow agreement, which encourages duty-free circulation of educational and informational materials across frontiers, reached a total of 49. Fifty-two countries now belong to the International Convention on the Protection of Cultural Property, which protects national property of cultural significance in the event of war.

Mass Communications. A UNESCO survey showed that 70% of the world's people have inadequate information facilities. To help meet this need UNESCO in 1965 opened a field laboratory in Senegal to study the uses of radio, television, and the press in adult education. It also carried out training programs in journalism and encouraged the establishment of national news agencies.

SALLY SWING SHELLEY
Information Officer, UNESCO, New York

UNITED STATES

Inaugural parade moves down Pennsylvania Avenue in Washington, D.C., on January 20.

UNITED STATES

Congressional enactment of major features of President Lyndon B. Johnson's program for a Great Society made 1965 significant as a year that pointed toward increased participation by the government in social change. U.S. military actions in South Vietnam and in the Dominican Republic were fraught with long-range consequences. Although international responsibilities and tensions mounted, the nation continued to enjoy general prosperity. The domestic scene was marred, however, by outbursts of racial violence. In the realm of scientific achievement, the United States impressed the world with new records in space exploration.

CONGRESS

The first session of the 89th Congress, praised by President Johnson as "the greatest in the history of our nation," convened on January 4 and adjourned on October 23. The opening day found 295 Democrats and 140 Republicans in the House, and 68 Democrats and 32 Republicans in the Senate.

The president's televised State-of-the-Union message was delivered on the first evening to a joint session in the House chamber. His domestic program pointed toward three goals: "To keep our economy growing; to open for all Americans the opportunities now enjoyed by most Americans; to improve the quality of life for all." To attain them, he recommended such measures as medical care for the aged to be financed through Social Security, extended aid to education, expansion of the war on poverty, urban development programs, the elimination of obstacles to voting, reductions in excise taxes, and the prohibition of state right-to-work laws opposed by organized labor. In foreign affairs he reiterated policies of peace, security, expanded trade, international cooperation, and adherence to commitments against aggression.

Budget. The president's administrative budget, submitted on January 25, proposed expenditures of $99.7 billion for fiscal year 1966. The budget, with an estimated deficit of $5.3 billion, marked an increase of $2.2 billion over the previous year. The consolidated cash budget, including all federal programs and trust funds, anticipated expenditures of $127.4 billion and receipts of $123.5 billion. During the session, Congress appropriated $119,337,566,896 —the largest total in any year since World War II. The administration had submitted requests totaling $121,748,074,896. (See BUDGET, U.S.)

Anti-Poverty Programs. The first of the president's major domestic programs to be enacted in the session was the $1.1 billion aid bill for the depressed areas of Appalachia. The bill passed the Senate by a vote of 62–22 on February 1, and the House by a vote of 257–165 on March 3. A bill to expand manpower training nationally and extend the program to 1969 was given final passage by the Senate on April 9 and by the House on April 13; it was signed by the president on April 26. A general bill for continuing aid to depressed areas for five years was passed, 264–138, by the House on August 12 and by voice vote in the Senate on August 16; it was approved by the president on August 26. The new law authorized $710 million for grants and loans to stimulate business and employment for the first year, and $760 million annually thereafter. Funds for the anti-poverty program were doubled for the fiscal year 1966 by legislation passed by a voice vote in the House on September 23 and by a 46–22 vote in the Senate on September 24. The authorization was $1.785 billion, or $285 million more than requested. (See also ANTI-POVERTY PROGRAM.)

Education. The nation's first large-scale program of direct federal aid to elementary and secondary schools was enacted by a vote of 263–153 in the House on March 26, and 73–18 in the Senate on April 9. The $1.3 billion measure, approved by the president on April 11, provided money to school districts on the basis of the number of needy children rather than state wealth. The bill skirted the problem of church-state relations by including funds for parochial or private pupils to be disbursed under public school supervision. The Higher Education Act of 1965, providing the first federal scholarships for general college undergraduates, as well as other college aid, was passed on October 20 by a 313–63 vote in the House and by voice vote in the Senate; it was approved by the president on November 8. Legislation creating a National Foundation on the Arts and the Humanities, to provide financial aid to artists, actors, dancers, musicians, and other persons in the arts, was signed on September 29. (See also EDUCATION.)

Excise Taxes. Administration proposals to reduce federal excise taxes by $4.7 billion, graduated over a four-year period and intended to stimulate the economy, were enacted by voice votes in both houses on June 17 and signed by the president on June 21. Automobiles, appliances, amusements, and various luxury goods were among the major items affected. (See also TAXATION.)

Health Care. The long-discussed, administration-supported medical care program for the aged (Medicare), financed through the Social Security system, was passed in the House on July 27, 307–116, and in the Senate on July 28, 70–24, and was signed by the president on July 30. Effective on July 1, 1966, the new law provides basic hospital care for 60 days for most persons over 65 years of age, with the patient paying the first $40 of costs. For 30 additional days of care, the patient will pay $10 each day. A supplementary plan, optional for enrollees over 65, covers the cost of physicians, nurses, and supplies, including home visits, for a monthly premium of $3, with the patient paying the first $50 of annual costs and 20% of annual costs above $50. Cash benefits under other Social Security programs were increased by the new law.

The new Social Security programs, estimated to cost $6.5 billion in 1967, will be financed by anticipated revenues of $4.5 billion from Social Security tax increases, by $1.4 billion from general revenues, and by $600 million from voluntary premiums. Maximum payroll earnings subject to the Social Security tax were increased from $4,800 to $6,600, and the tax paid by both employees and employers will rise in steps from 8.4% in 1966 to 11.3% in 1987. (See also MEDICARE; SOCIAL SECURITY.)

An earlier bill, passed by the Senate on June 23 and by the House on July 8, and approved by the president on July 15, empowered the secretary of health, education, and welfare to exercise tighter controls over drug distribution. On September 21, both houses passed the Water Quality Act of 1965, authorizing a federal antipollution program operating in cooperation with states. The president signed the bill on October 2. (See WATER SUPPLY.) A bill to set standards for automobile exhausts to help prevent air pollution was signed by the president on October 20. (See POLLUTION.)

Legislation for regional programs to treat heart disease, stroke, and cancer, was approved on October 6. The bill authorized grants ranging from $50 million to $200 million over three years. On October 22, programs for financial aid for professional education in medicine and pharmacy were approved. (See Medicine; Public Health.)

Housing. An omnibus housing bill supported by the administration was passed by a Senate voice vote on July 26 and by a 251–168 vote in the House the next day, and was signed by the president on August 10. The bill authorized extensive grants and loans, estimated at $7.8 billion over four years, and contained a provision for paying rent supplements to landlords of low-income families. Appropriations for the rent subsidies were not voted during the session. (See also Housing.)

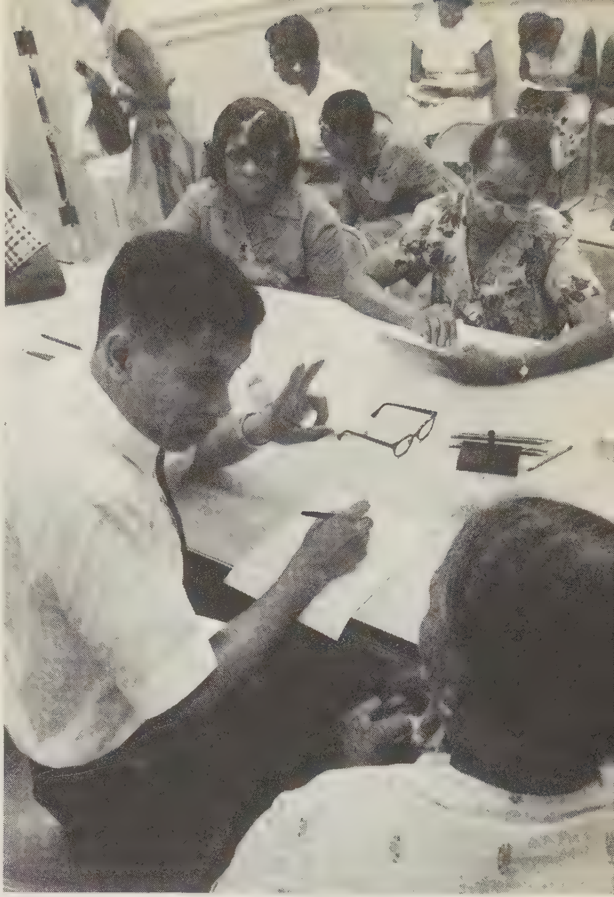
A new cabinet-level Department of Housing and Urban Development was created by voice votes in the Senate on August 30 and in the House on August 31, with approval by President Johnson on September 9. On Jan. 13, 1966, the president named Robert C. Weaver to the new Cabinet post.

Voting Rights. One of the most notable of the administration's measures—the authorization to use federal authority to prevent discrimination in voting rights—was passed by a 328–74 vote in the House on August 3 and by a 79–18 vote in the Senate on August 4, and was signed by President Johnson in the U.S. Capitol on August 6. "Today the Negro story and the American story fuse and blend," the president said, adding that "if any county anywhere in this nation does not want federal intervention it need only open its polling places to all of its people." The bill suspended literacy and other voter tests and authorized federal supervision of registration in states and individual voting districts where tests had been used and where fewer than half of the voting age residents were registered or had voted. (See also Civil Rights.)

Immigration. Revision of the immigration laws to eliminate the national origins quota system was enacted with administration support on September 30 by a 320–69 vote in the House and by a voice vote in the Senate. The president signed the bill at the base of the Statue of Liberty in New York harbor on October 3. For the first time, the bill set an annual quota for the Western Hemisphere—120,000—without a specific limit for any country. For the rest of the world, a quota of 170,000 was set with no more than 20,000 admitted from any one nation. No limit was placed on spouses or immediate relatives of U.S. citizens, and priority was given to members of families, to skilled workers, and to refugees. (See also Immigration.)

Farm Bill. The administration's omnibus farm bill was approved by a vote of 219–150 in the House on October 8 and by a voice vote in the Senate on October 12. Signed on November 4, the measure provided a new program of acreage reduction and price support for cotton, giving the cotton farmer 65% to 90% of parity, and continued the policy of maintaining a single price for cotton, whether sold at home or abroad. It also provided for individual sales quotas for premium milk, a cropland retirement of 40 million acres, and a continuation of other major farm programs. The cost of the bill's provisions was estimated at $4 billion. (See also Agriculture.)

Highway Beautification. By a House vote of 245–138 on October 8 and by a Senate voice vote on October 13, the administration secured a compromise Highway Beautification Act. The president signed the bill on October 22, commenting that "it is a first step." The bill authorized federal funds to help states eliminate billboards and junkyards near noncommercial sections of primary and interstate highways, with standards to be set cooperatively by the secretary of commerce and the states.



VERNON MERRITT III, BLACK STAR

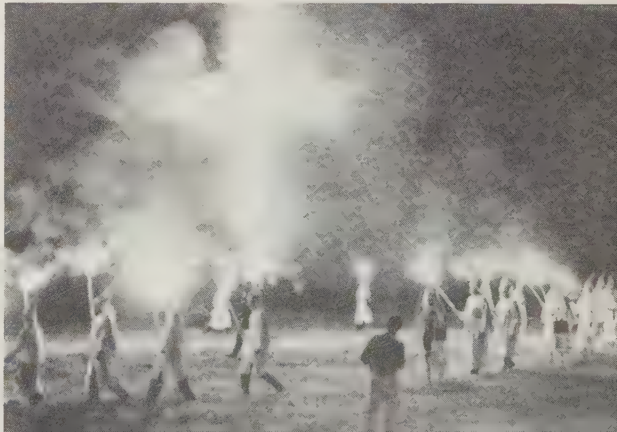
REGISTRATION by Southern Negroes was given great impetus as a result of the adoption of the Voting Rights Act of 1965. The president vigorously supported the measure.

Pay Raises. An average increase of about 10% in basic pay for armed forces personnel was approved by an 89–0 vote in the Senate on August 11 and by a voice vote in the House on August 12. President Johnson signed the bill on August 21. The increases,

(*Continued on page 716*)

THE KU KLUX KLAN, accused of acts of violence in the South, was investigated by Congress in 1965. Below, Klansmen parade around fiery cross during North Carolina rally.

WIDE WORLD



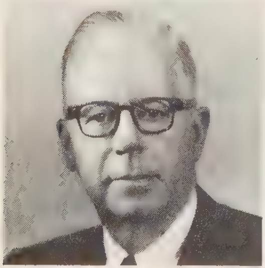
UNITED STATES · Information Highlights

ALASKA
HAWAII

Area: 3,615,211 square miles.
Population: 194,583,000 (July 1, 1965, est.).
Chief Cities (1965 est.): Washington, D.C., the capital, 810,000; New York City, 8,080,000; Chicago, 3,520,000; Los Angeles, 2,695,000; Philadelphia, 2,030,000; Detroit, 1,600,000; Houston, 1,100,000.
Government: *President*—Lyndon B. Johnson; *vice president*—Hubert H. Humphrey. *Congress*—Senate, 100 members; party seating (Jan. 10, 1966): Democrats 68, Republicans 32. House of Representatives, 435 members; party seating (Jan. 10, 1966): Democrats 293, Republicans 140, vacancies 2.
Religious Faiths: Protestants, 55% of population (Baptists, 19%; Methodists, 11%; Lutherans, 7%; Presbyterians, 4%; Episcopalians, 3%; others, 11%); Roman Catholics, 37%; Jews, 5%; Greek Orthodox, 3%.
Education: *Literacy rate* (1960)—98% of population aged 14 and over. *Total school enrollment* (1964–65)—54,964,737 (elementary, 32,577,114; secondary, 17,107,603; higher, 5,280,020).
Finance (1965 est.): *Revenues*, $119,742,000,000; *expenditures*, $122,690,000,000; *public debt* (1964), $312,500,000,000.
Gross National Product (1964): $628,700,000,000.
National Income (1964): $514,400,000,000; average annual income per person, $2,679.
Economic Indexes (1964): *Industrial production*, 141 (1958=100); *agricultural production*, 118 (1956–57=100); *cost of living*, 107 (1958=100).
Manufacturing (metric tons, 1964): Crude steel, 115,901,000; cement (incl. Puerto Rico), 65,728,000; meat, 14,352,000; wheat flour, 12,048,000; plastics and resins, 4,284,000; sugar, 4,037,000; aluminum, 2,315,801.
Crops (metric tons, 1964): Corn, 90,138,000 (ranks 1st among world producers); wheat, 35,121,000 (world rank, 2nd); sugar beets, 21,032,000 (world rank, 2nd); soybeans, 19,048,000 (world rank, 1st); oats, 12,801,000 (world rank, 1st); sorghum, 12,453,000 (world rank, 1st); potatoes, 10,859,000 (world rank, 6th); barley, 8,776,000 (world rank, 2nd); citrus fruits, 6,883,000 (world rank, 1st); cottonseed, 5,647,000 (world rank, 1st); tomatoes, 5,047,000 (world rank, 1st); cotton lint, 3,305,000.
Minerals (metric tons, 1964): Coal, 457,384,000 (ranks 2nd among world producers); iron ore, 86,197,000 (world rank, 2nd); salt, 28,688,000 (world rank, 1st); gypsum, 9,692,000 (world rank, 1st); copper, 1,131,054 (world rank, 1st); crude petroleum, 2,805,125,000 barrels (world rank, 1st); zinc, 521,500 (world rank, 2nd); lead, 259,463 (world rank, 3rd); magnesium, 72,110 (world rank, 1st).
Foreign Trade (1964): *Exports*, $26,582,000,000 (chief exports: nonelectrical machinery, $4,703,000,000; electrical machinery, $1,642,000,000; motor vehicles, $1,664,000,000; wheat and wheat flour, $1,533,000,000); *imports*, $20,251,000,000 (chief imports: crude petroleum, $1,080,000,000; coffee, $1,200,000,000; nonelectrical machinery, $861,000,000). *Chief trading partners:* Canada (took 19% of exports, supplied 23% of imports); Japan (took 8% of exports, supplied 9% of imports); Britain (took 6% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 3,620,457 miles (1,367,153 paved); *motor vehicles* (1964), 86,193,000 (automobiles, 71,864,000); *railways* (1963), 215,090 miles; *merchant vessels* (1964), 2,529 (21,748,000 gross registered tons).
Communications: *Telephones* (1965): 88,787,400; *television stations* (1965), 700; *television sets* (1965), 70,350,000; *radios* (1965), 242,000,000; *newspapers* (1965), 1,763 (daily circulation in 1964, 60,412,266).

UNITED STATES CABINET MEMBERS

(Note: Biographies of Secretary of State RUSK and Secretary of Defense McNAMARA appear under their own headings)


UPI

HENRY HAMILL FOWLER became secretary of the Treasury on April 1, 1965, succeeding Douglas Dillon. Although not a banker or a specialist in monetary policy, he was regarded as a conservative with respect to government spending and freedom for business. Born in Roanoke, Va., on Sept. 5, 1908, Fowler graduated from Roanoke College (1929) and Yale University (1933). He was a lawyer for the Tennessee Valley Authority between 1934 and 1939, when he became its assistant general counsel. During World War II and the Korean War, he served with several government agencies, including the Office of Production Management, the War Production Board, the Foreign Economic Administration, and the Defense Production Administration. Between periods of public service, he practiced law. He was assistant secretary of the Treasury, 1961–64.

WIDE WORLD

NICHOLAS deB. KATZENBACH, sworn in as attorney general on Feb. 13, 1965, drafted the Voting Rights Act. He was born in Philadelphia on Jan. 17, 1922. In World War II, he served in the U.S. Army Air Force, was shot down over the Mediterranean Sea, and was imprisoned by the Italians and the Germans. He graduated from Princeton University (1945), received a law degree from Yale (1947), and attended Oxford University. He taught at Yale and the University of Chicago, then became legal counsel for the Department of Justice in 1961, deputy attorney general in 1962, and acting attorney general in 1964. When the University of Mississippi was integrated in 1962, Katzenbach led U.S. marshals against rioting segregationists. He confronted Gov. George Wallace when the latter sought to bar Negroes from the University of Alabama in 1963.

WIDE WORLD

LAWRENCE FRANCIS O'BRIEN became postmaster general on Nov. 3, 1965. O'Brien, one of President Johnson's closest political advisers, was born in Springfield, Mass., on July 7, 1917. After graduating from Northeastern University in 1942, he served in the U.S. Army, then headed a realty firm, and in 1948 managed Foster Furcolo's successful campaign for Congress. He then became a public relations consultant, in the meantime managing John Kennedy's successful campaigns for the Senate in 1952 and 1958. Kennedy regarded O'Brien as a brilliant political strategist, and asked him to manage his 1960 presidential campaign. After his election Kennedy named O'Brien his special assistant for congressional relations. O'Brien continued in this capacity under President Johnson, and helped win passage for many administration bills.

STEWART LEE UDALL, secretary of the interior since Jan. 21, 1961, was by 1965 directing much of his attention to the shrinking supply of pollution-free water in the United States. Udall was born at St. Johns, Ariz., on Jan. 31, 1920. He was a Mormon missionary, served in the Air Force during World War II, and graduated from the University of Arizona (LL.B., 1948). He practiced law in Tucson until his election to the U.S. House of Representatives in 1954. In Congress, and later as secretary of the interior, he was to a large degree concerned with conservation, seeking to balance the needs of man against the importance of preserving America's natural heritage. In 1960, at the Democratic presidential convention, Udall swung Arizona's votes to John Kennedy. Elected to a fourth House term in 1960, he soon resigned to enter Kennedy's Cabinet.

JOHN MOSS—BLACK STAR

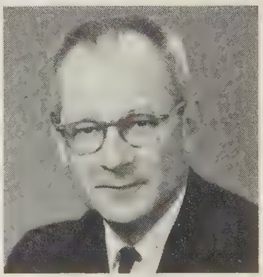
ORVILLE LOTHROP FREEMAN was sworn in as secretary of agriculture on Jan. 21, 1961. Farm production, income, and exports have risen, in some cases markedly, during his administration. He favors high price supports and production limitations. Freeman was born in Minneapolis, Minn., on May 9, 1918. He is a graduate of the University of Minnesota (B.A., 1940; LL.B., 1946). A member of the Marine Corps Reserve, he was called to duty in World War II, was wounded, and received the Purple Heart; he was discharged as a major. After the war, Freeman practiced law in Minneapolis and became active in the Minnesota Democratic-Farmer-Labor party. While state chairman, he managed Hubert Humphrey's successful campaign for the U.S. Senate in 1948. Freeman ran for governor of Minnesota five times, and was elected in 1954, 1956, and 1958.

UPI

JOHN THOMAS CONNOR became secretary of commerce on Jan. 18, 1965. He was born in Syracuse, N.Y., on Nov. 3, 1914. Connor graduated *magna cum laude* from Syracuse University (B.A., 1936), and then graduated from Harvard Law School (LL.B., 1939). He went to Washington in 1942 as general counsel for the Office of Scientific Research and Development, and set up a production program for penicillin. In 1944 and 1945, Connor was an air combat intelligence officer in the Marine Corps. Next he was an assistant to Secretary of the Navy James V. Forrestal. Sharing Forrestal's view that a well-rounded man should be experienced in both government and industry, Connor joined Merck & Company, Inc., a pharmaceutical firm, in 1947. In 1955 he became its president. He organized business support for the election of President Johnson in 1964.

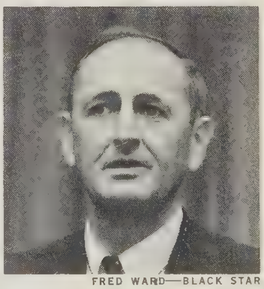
PIX

WILLIAM WILLARD WIRTZ has served as secretary of labor since Sept. 25, 1962, a period marked by increasing government intervention in labor-management disputes and by the imposition by the government of wage-price guidelines to curb inflation. Wirtz, born in DeKalb, Ill., on March 14, 1912, is a graduate of Beloit College (B.A., 1933) and the Harvard Law School (LL.B., 1937). He taught law at the State University of Iowa and at Northwestern University before going to Washington in 1942 as assistant general counsel to the Board of Economic Warfare. He also served with the War Labor Board and as chairman of the National Wage Stabilization Board. He was a professor of law at Northwestern (1946–54) and a law partner of Adlai Stevenson (1955–60) before becoming undersecretary of labor on Jan. 30, 1961.



PICTORIAL PARADE

JOHN WILLIAM GARDNER became secretary of health, education, and welfare on Aug. 18, 1965. Regarded as the most influential behind-the-scenes figure in U.S. education, he had been chairman of the White House Conference on Education in July 1965. Gardner, born in Los Angeles on Oct. 8, 1912, has degrees from Stanford University (B.A., 1935; M.A., 1936) and the University of California (Ph.D., 1938). He taught psychology at Connecticut and Mount Holyoke colleges, and served as a Marine intelligence officer in World War II. He joined the Carnegie Corporation in 1946, and became its president in 1955. In the next decade the corporation dispensed more than $100 million, mostly for educational research. Gardner's book, *Excellence: Can We Be Equal and Excellent Too?* called for high standards in everything from plumbing to philosophy.



FRED WARD—BLACK STAR

ROBERT CLIFTON WEAVER was sworn in on Jan. 18, 1966, as the first secretary of housing and urban development. He is the first Negro to serve in the Cabinet. Weaver was born in Washington, D.C., on Dec. 29, 1907. He earned three degrees at Harvard University (B.A., 1929; M.A., 1931; Ph.D., 1934). One of many young intellectuals who entered the government during the first administration of President Franklin Roosevelt, Weaver served with a number of agencies during the 1930's and 1940's, often as an adviser on minority problems. He fought discrimination in government, industry, and housing. He was with the United Nations (1946) and held several city and state housing posts in New York. In 1961–66 he was administrator of the Housing and Home Finance Agency. His two books deal with the Negro's problems in labor and housing.

UPI

effective September 1, totaled more than $1 billion, compared with the $447.6 million asked by Johnson. (See NATIONAL DEFENSE.)

Unsuccessful Legislation. Congress failed to approve several measures supported by the administration. One would have repealed the right-to-work provision—section 14(b) of the Taft-Hartley Act—that permits states to prohibit the union shop. Repeal of 14(b), strongly supported by labor unions, passed the House by a vote of 221–203 on July 28. It was shelved in the Senate after a motion was defeated on October 8 to shut off a filibuster conducted by Southern Democrats and by Republicans under the guidance of Everett M. Dirksen of Illinois, the Republican minority leader.

"Home rule" for the District of Columbia also failed to win approval. A District home rule bill was passed by the Senate on July 22. But the bill was laid aside by the House, which voted instead on September 20 to permit a local board to prepare a charter for a referendum, subject to final congressional approval.

CIVIL RIGHTS

The struggle to eliminate racial discrimination continued to stir the conscience of the nation. Passage by Congress of the Voting Rights Acts of 1965 (see above) provided new legal protection against the political barriers that Negroes often faced, particularly in the South. Education, better housing, and jobs were also crucial to efforts to eliminate inequality of opportunity because of race. (The unemployment rate for Negroes was about twice as great as that for whites.) Congress and the administration contemplated remedies to avoid the perpetuation of poverty among a minority of Americans. The anti-poverty programs were directed toward overcoming economic deprivations resulting from automation and other technical changes in industry and from educational or other social handicaps.

The pace of desegregation, though steady, was not universal, partly because the concentration of minorities in the cores of great cities have created a *de facto* segregation. The U.S. Office of Education reported on September 30 that 217,000 Negro pupils in the deep South were enrolled with whites in the fall school term. This figure represented 7.5% of all Negro students, compared with 2.6% a year before. On December 6 the Supreme Court moved to accelerate school desegregation by ruling that a grade-a-year plan at Ft. Smith, Ark., was inadequate. By December 31, the Department of Justice had sent voting examiners to 36 Southern counties, under the provisions of the Voting Rights Act. The department continued to bring suits against various forms of discrimination under the Civil Rights Act of 1964.

PACIFISTS opposed to U.S. policy in South Vietnam manage to burn their draft cards in New York City on November 6 despite dousing from fire extinguisher held by spectator.

UPI

Differing strategies of civil rights leaders tended to fragmentize the movement and dilute its impact somewhat. However, the pressure by Negroes for racial justice—"freedom now"—remained unabated. On March 28, after encountering violent resistance to racial demonstrations in Alabama, Dr. Martin Luther King, Jr., president of the Southern Christian Leadership Conference, appealed for a national economic boycott of Alabama and the withdrawal of federal funds. He declared that demonstrations in the South must continue until all Negroes could vote, until the end of "abuse of police power and police brutality," and until Negroes participated in administering the anti-poverty program. On March 29, Whitney M. Young, Jr., executive director of the National Urban League, objected to a boycott, as did leaders of the Johnson administration, on the ground that it would hurt Negroes and make no distinction between friend and foe.

Roy Wilkins, executive secretary of the National Association for the Advancement of Colored People, said at the organization's convention in Denver on June 28 that implementation of the Civil Rights Act was the chief task. On July 5 the Congress of Racial Equality, in convention at Durham, N.C., called for the immediate withdrawal of U.S. troops from Vietnam and the Dominican Republic. However, the delegates withdrew their resolution on the recommendation of James Farmer, the national director, who urged the organization to concentrate on civil rights activities.

Differences among the more extreme Negro nationalist movements culminated in the killing of Malcolm X in New York City on February 21. The murder was committed apparently because the victim had left the Black Muslims to found his own group.

Demonstrations. Both Negroes and whites demonstrated frequently in various cities throughout the country, including Cleveland, Boston, Springfield (Mass.), Milwaukee, Chicago, and many Southern communities, large and small. The most publicized activity—the demonstrations at Selma, Ala.—became a national symbol of protest and of sacrifice for conscience. The Selma demonstration developed in the weeks after an address there on January 2 by the Rev. Martin Luther King. Dr. King announced plans for massive street demonstrations if they became necessary to secure Negro voter registrations. As resistance to the registration campaign increased among local officials, civil rights leaders organized a protest march, set for March 7, from Selma to Montgomery, the state capital. The march was forcibly stopped by state troopers and sheriff's deputies.

A second march, joined by white ministers from the North, was stopped without bloodshed on March 9, a day on which thousands of Negro and white marchers in many Northern and Western cities demonstrated in sympathy. James J. Reeb, a Unitarian minister from Boston, died on March 11, two days after he was attacked on a Selma street by whites. Nationwide protests continued, and a sit-in at the White House and a sit-down nearby were ended forcibly.

Meanwhile, on March 17, a U.S. court in Montgomery, Ala., ordered that a march from Selma to Montgomery be permitted and protected. On March 20, after Gov. George C. Wallace of Alabama disclaimed having adequate resources to protect the marchers, President Johnson placed the state's National Guard under federal authority for that purpose. Some 3,000 persons began the march to Montgomery on March 21. It ended without serious incident on March 25, with a rally by 25,000 persons at the state capitol. Later that day, Mrs. Viola Liuzzo, a civil rights worker from Detroit, was shot and killed while driving her car. A member of the Ku Klux Klan was arrested for her murder, but was acquitted by a jury on October 22. However, three members of the Klan were later found guilty of conspiracy.

Riots and Violence. The most devastating racial disturbance in the United States in decades shook the Watts section of Los Angeles from August 11 to 16. As many as 10,000 Negroes were involved in six days of looting, arson, and assault, during which 34 persons died, 1,032 were injured, and 3,952 were arrested. Property loss totaled more than $40 million, with some 600 buildings damaged or destroyed. A commission appointed by Gov. Edmund G. Brown of California and headed by John A. McCone, former director of the Central Intelligence Agency, reported on December 6 that the riots, arising from a minor incident, were rooted in unemployment, insufficient schooling, and hatred of the police as a symbol of authority. The commission recommended programs for education and training, job development, and law enforcement. Violence in Chicago, Philadelphia, and other cities was less extensive.

In the South the violence was largely committed by whites. It took the form of clandestine bombings of homes, churches, and other buildings. Also, crosses were burned by the Ku Klux Klan, which was denounced by President Johnson on March 26 as a "hooded society of bigots."

At the urging of the president, the House Committee on Un-American Activities turned its attention to the Klan. On March 30, committee chairman Edwin E. Willis (D, La.) announced that a preliminary inquiry had revealed "shocking crimes . . . carried out by highly secret action groups within the Klans." The committee began public hearings on October 19; its chief investigator reported that there were 381 local Klan units in the South, of which 260 were in an organization headed by Robert M. Shelton, Jr., of Tuscaloosa, Ala. The investigation proved less sensational than expected, dealing to a great extent with the alleged personal use of Klan funds by certain Klan leaders. Imperial Wizard Shelton refused to answer the 158 questions put to him by the committee, claiming possible self-incrimination and violation of his rights. Many other witnesses also declined to answer the committee's questions. The committee believed that the investigation would at least mobilize Southern opinion against the Klan. The hearings, recessed on November 10, were resumed on Jan. 4, 1966.

Supreme Court Decisions. Again in 1965, the U.S. Supreme Court rendered important decisions in the field of civil liberties. On March 1 the court declared unconstitutional a Maryland film censorship law, holding that films can be censored only after judicial proceedings. On March 8 it broadly interpreted the rights of persons who are religious conscientious objectors to military service. It held on April 5 that the Constitution requires that defendants in state courts have the right to confront witnesses against them. On April 27 it ruled, 6–2, that state judges may not comment on a defendant's refusal to testify, and unanimously held unconstitutional a Virginia law requiring an affidavit of residence six months before a federal election unless a poll tax had been paid. On May 3 it held, 6–3, that the secretary of state can refuse passports for travel to Cuba. On May 24 it held unconstitutional a federal law restricting mail delivery of Communist propaganda from abroad. On June 7 it held two laws to be unconstitutional: by a 5–4 decision, a law preventing Communist party members from serving as labor union officers, and by a 7–2 decision, a Connecticut law forbidding use of birth-control devices. On the same day, by a 5–4 vote, it held that the Constitution bars televising notable criminal trials in state courts. (See also LAW.)

Employment Opportunity. On Nov. 22, 1965, Franklin D. Roosevelt, Jr., chairman of the Equal Employment Opportunity Commission, announced guidelines against job discrimination because of sex, in accordance with the Civil Rights Act of 1964. State laws protecting women would be honored, but laws that raised barriers to women workers would not be upheld.

THE ECONOMY

Despite pockets of poverty, the American economy advanced to new peaks of prosperity in 1965. The gross national product (GNP) leaped upward to more than $675 billion, compared with $628.7 billion in 1964. President Johnson said on December 2 that unemployment had dropped to 4.2% of the civilian labor force, the lowest percentage in eight years. Personal income rose steadily to a new high of $535.9 billion in the third quarter. Disposable (after tax) income was at a record annual rate of $471.3 billion. Manufacturing operated at about 90% of capacity, close to the rate considered ideal.

However, there were signs of inflation that, in turn, led to a debate over fiscal policy. After May, the consumer price index averaged 1.8% higher than in the corresponding period of 1964. The increased cost of food between March and July was one of the main causes for the rise, but in October a price increase of 0.2% above the September level was the result of higher costs of all major items except food. Federal spending for Vietnam and other military commitments increased at a rate that would bring administrative budget expenditures in fiscal year 1966 to at least $105 billion, with a deficit of about $8 billion, compared with a $3.5 billion deficit in fiscal year 1965.

Although President Johnson preferred that no immediate action be taken to tighten the money market, the Federal Reserve Board, under the leadership of Chairman William McChesney Martin, Jr., announced on December 5 that it had voted 4–3 to raise the interest rate charged commercial banks, from 4% to 4.5%—the highest level since 1930. The president expressed his regret that the board had not waited to take action until it learned more about the new federal budget and other data to be submitted in January 1966. It became clear that the cost of the war in Vietnam would increase the new budget and force reductions in domestic programs, "particularly in some of those passed by Congress this year," as John T. Connor, secretary of commerce, said on December 10. It was reported on December 14 that the administration would study the need for a tax increase and that Henry H. Fowler, secretary of the treasury, tended to favor higher taxes.

During the year, the administration sought to prevent inflationary rises in wages and prices. In November, price increases announced for aluminum and copper were rescinded by the industries after the government released these metals from the national stockpile for sale in competition with industry. The administration also made efforts to enlist the cooperation of business in lowering investments abroad—a policy that reduced the outflow of dollars. (See also ECONOMIC REVIEW, U.S.)

LABOR

The administration sought to hold wage increases to no more than 3.2% of existing levels. To keep contracts within these guidelines, administration leaders participated actively in negotiations between labor and management. President Johnson himself took part in talks in the steel industry. In the final hours of negotiations before new contracts were announced on September 3, the president urged that remaining issues be compromised half and half.

The Executive Council of the AFL-CIO, meeting in Bal Harbour, Fla., from February 22 to March 2, proposed a $2 billion federal program of grants for public works and urged an increase in the minimum wage from $1.25 to $2 an hour. The council announced plans to make permanent its Committee on Political Education to take an active part in election campaigns, and it renewed support for medical care for the aged and for reducing the work week to 35 hours.

At its annual convention, held in San Francisco in December, the AFL-CIO reelected President George Meany and approved his slate of younger men as replacements for eight council members. Resolutions adopted at the convention supported an extension of labor laws to farm workers, an income tax reduction for lower incomes, and federal financial assistance in meeting the economic effects of automation. (See also LABOR.)

FOREIGN AFFAIRS

American military involvement in Southeast Asia and the Dominican Republic, in the cause of peace and international security, had profound effects on foreign relations and domestic programs.

Vietnam. At the beginning of 1965, U.S. forces were serving as advisers to the South Vietnamese in their struggle against Vietcong (Communist) guerrillas and their allies from North Vietnam. On February 7, U.S. jet planes bombed military installations in North Vietnam in retaliation for a ground attack on an American airbase in South Vietnam. Both the Communist Chinese and Soviet governments denounced the American action. President Johnson asserted on February 17 that "we seek no wider war," but that U.S. policy would continue to be "the defense and protection of freedom of a brave people who are under attack that is controlled and directed from outside their country."

In a major speech at Johns Hopkins University on April 7, he said that the United States was prepared for "unconditional discussions" for peace in Vietnam and urged a cooperative economic development program in Southeast Asia for which he would recommend appropriations of $1 billion in U.S. funds. He served notice that "we will not be defeated" and, as "essentials of any final settlement," specified "an independent South Vietnam . . . free from outside interference, tied to no alliance, a military base for no country."

Support by Congress was implicit in its grant of $700 million for "whatever must be done" to protect South Vietnam. The money, requested on May 4, was voted by the House (408–7) on May 5, and by the Senate (88–3) on May 6.

The United States halted air action against North Vietnamese targets from May 13 to 18, but this overture for negotiations brought no favorable reaction from North Vietnam. Thereafter, the United States stood ready to negotiate, while steadily increasing its military commitment throughout the year. U.S. troops, in association with South Vietnamese and Australian units, saw their first major action against Vietcong positions on June 28. By Jan. 12, 1966, American military personnel in Vietnam had been increased from 20,000 to 190,000, and costs were running at an annual rate of $2.6 billion, with sharp increases expected. By Feb. 7, 1966, 2,005 Americans had been killed in action since 1961.

Escalation of the American role in Vietnam stemmed from the administration's determination to honor an American commitment to the South, and to impress the Communists with the high cost of aggression. Polls indicated that most Americans supported the Johnson administration's policy in Vietnam, although there was some vocal opposition. As selective service calls increased, a few young men burned their draft cards, and Congress voted to make this action unlawful. On November 27, some 20,000 marchers picketed the White House in opposition to American policy, and similar demonstrations took place elsewhere. Critics of U.S. policy questioned the morality of the U.S. commitment, the extent to which the administration really wanted a peaceful settlement, and alleged savagery against the civilian population.

Dominican Republic. A revolt in the Dominican Republic and the overthrow of its government resulted in the dispatch of American forces there on April 28, when President Johnson became convinced that "American lives are in danger" and that assistance to evacuate Americans and others was needed. It was apparent also that the administration would not tolerate the possibility of another Communist take-over, as in Cuba. By May 5, U.S. forces numbering almost 20,000 had been sent to the island.

On May 6 the foreign ministers of the Organization of American States (OAS) approved (14–5, with Venezuela abstaining) a U.S. resolution to establish an inter-American military force to restore order. Both the OAS and the United States sent peace missions, but fighting continued until an uneasy truce was established on May 21. The Inter-American Peace Force began its operations on May 23, and by June 18 an OAS peace committee had drawn up a formula for ending the impasse between the rebels and the military junta. It was not until September 3, however, that a provisional Dominican government was installed.

One effect of the American military action was increased tension between the United States and some Latin American governments. These difficulties were complicated on September 20 when the U.S. House of Representatives, without administration approval, passed, 312–52, a resolution endorsing the unilateral use of force by any country in the hemisphere to prevent Communist aggression in the Americas. At an OAS conference in Rio de Janeiro, Brazil, November 17–30, a United States proposal for a permanent inter-American force to assume peacekeeping duties met opposition, and no action was taken.

Panama. President Johnson announced on September 24 that the United States and Panama had agreed in principle to recognize the sovereignty of Panama over the Panama Canal, and that the United States and Panama would operate the canal jointly.

Cuba. Formal diplomatic relations with Cuba re-

Respect 1954 Geneva Accords
WAR erodes the "Great Society"
STEPS
New Action to Speed Negotiati
Respect 1954 Geneva Accords

PEACE MARCHERS stream past White House, in Washington, D.C., on November 27. Critics of U.S. Vietnamese policy ranged from more moderate demonstrators shown here to those who openly expressed hope for a Communist victory.

UPI

mained closed. On September 28, however, Premier Fidel Castro offered to permit refugees to leave Cuba for the United States—a proposal accepted by President Johnson on October 3. At first, some Cubans came by boat, but on November 6 an agreement was made through the Swiss embassy in Havana for a U.S. airlift of several thousand persons a month.

The World Scene. American responsibilities were not limited to specific crises, but also involved major leadership roles in the maintenance of economic and political stability throughout the world. Congress appropriated $3,218,000,000 for foreign aid for the fiscal year ending June 30, 1966, and appropriated $714 million for related programs, including $102 million for the Peace Corps.

The sudden death on July 14 of Adlai E. Stevenson, ambassador to the United Nations, left a void in American diplomacy. Stevenson was replaced on July 20 by Arthur J. Goldberg, associate justice of the Supreme Court. (See STEVENSON; GOLDBERG.)

The United States and other powers, acting either directly or through the United Nations, used their good offices to bring an end to armed hostilities between India and Pakistan over Kashmir. However, they failed to dissuade Rhodesia from unilaterally declaring its independence from Britain.

Pope Paul VI became the first pontiff to visit the United States. Arriving in New York City on October 4, the pope spoke at the United Nations in the cause of peace, conferred with President Johnson, and toured parts of the city.

(See also FOREIGN POLICY, U.S.; UNITED NATIONS; and articles on individual countries.)

DEFENSE AND SPACE

Congress appropriated $46.9 billion for the Department of Defense and showed no major disposition to interfere with the sometimes controversial policies of Secretary of Defense Robert S. McNamara, who placed strong reliance on the development of missiles, rather than on manned bombers.

The United States made great advances in space exploration in 1965. Maj. Virgil I. Grissom and Lieut. Comdr. John W. Young orbited the earth three times on March 23 and maneuvered a manned spacecraft for the first time. Maj. Edward H. White, 2nd, and Maj. James A. McDivitt completed 62 circuits on June 3–7, and White went outside the spacecraft for 20 minutes while it was in orbit. A third spaceship, carrying Lieut. Col. L. Gordon Cooper, Jr., and Lieut. Comdr. Charles Conrad, Jr., orbited 120 times on August 21–29. Lieut. Col. Frank Borman and Comdr. James A. Lovell, Jr., circled the earth 206 times on December 4–18. On December 15 they were joined in formation maneuvers by another craft carrying Capt. Walter M. Schirra, Jr., and Maj Thomas P. Stafford.

Lunar rocket probes sent photographs of the moon back to earth on February 20 and March 24. Another probe sped past Mars on July 14, and then transmitted some remarkable photographs to earth. (See also SPACE EXPLORATION.)

In somber contrast to these achievements, a power failure blacked out New York City and much of the Northeast on November 9. The blackout raised questions about the status of U.S. defenses.

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UNITED STATES AIR FORCE. See AIR FORCE.

UNITED STATES ARMY. See ARMY.

UNITED STATES COAST GUARD. See COAST GUARD.

UNITED STATES CONGRESS. See CONGRESS.

UNITED STATES MARINE CORPS. See MARINE CORPS.

UNITED STATES MINT. See COIN COLLECTING.

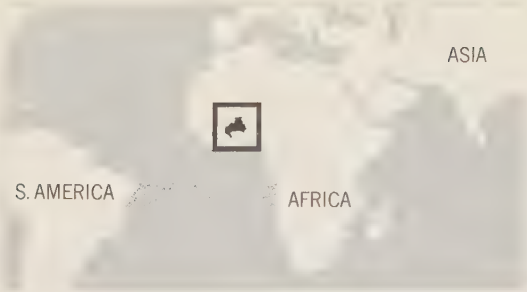
UNITED STATES NAVY. See NAVY.

UNITED STATES SUPREME COURT. See LAW; SUPREME COURT.

UNITED STATES TREASURY. See BUDGET, U.S.; MONEY.

UNIVERSITIES. See COLLEGES AND UNIVERSITIES; EDUCATION.

UPPER VOLTA



After a stormy political year in 1965, President Maurice Yaméogo of Upper Volta was ousted on Jan. 7, 1966, by Lt. Col. Sangoulé Lamizana, who took over as head of state. The coup followed a general strike in the capital, Ouagadougou, by labor unions protesting pay cuts ordered by the government in December.

Politics. Earlier, internal political readjustments in Upper Volta were evident from the dismissal of the ministers of commerce, national education, youth, and sports. Two former ministers, Maxime Ouedraogo and Bougouraoua Ouedraogo, received 10- and 2-year jail sentences, respectively, for fraud, forgery, and misappropriation of state funds.

President Yaméogo was nominated by the ruling Union Democratique Voltaïque as the only presidential candidate in the October election. During the campaign, he denounced the clandestine opposition group, the National Liberation Movement, as being led by ambitious and selfish intellectuals. The National Assembly was reelected also without opposition in November.

International Affairs. As a prime mover in the Conseil de l'Entente and the Common Organization of African and Malagasy States (OCAM), President Yaméogo took the lead in refuting criticism of these organizations by other African leaders. President Yaméogo continued to accuse Ghana's President Nkrumah of fostering subversion among his neighbors and threatened to retaliate by depriving Ghana of water required for its Volta River dam. While attending a meeting of the *Rassemblement Démocratique Africain* (RDA) leaders in Bouaké, Ivory Coast, in June, President Yaméogo also launched a particularly bitter attack against President Touré of Guinea as a "petty trade unionist" who had forgotten the past aid received from fellow RDA leaders.

UPPER VOLTA · Information Highlights

Area: 105,869 square miles.
Population: 4,763,000 (Dec. 31, 1964, est.).
Chief City (1962 est.): Ouagadougou, the capital, 63,000.
Government: *Head of State*—Lt. Col. Sangoulé Lamizana (seized power, Jan. 7, 1966). *Parliament*—National Assembly, 75 members, all belonging to the Volta Democratic Union.
Religious Faiths: Muslims, 26% of population; Roman Catholics, 4%; others, 70%.
Education: *Total school enrollment* (1962–63)—85,364 (primary, 81,072; secondary, 2,514; teacher-training, 1,012; technical, 766).
Finance (1965 budget): *Revenues,* $37,200,000; *expenditures,* $37,200,000; *monetary unit,* CFA franc (246.85 CFA francs equal U.S.$1).
Gross National Product (1962): $183,000,000.
Economic Index: *Cost of living* (1964), 150 (1958=100).
Manufacturing: *Meat* (1962), 8,000 metric tons.
Crops (metric tons): Peanuts (1964–65), 129,000 (ranks 14th among world producers); millet and sorghum (1962–63), 772,000; maize (1964–65), 110,000; sweet potatoes and yams (1963–64), 75,000; cottonseed (1963–64), 6,000.
Minerals (1964): gold, 33,200 troy ounces.
Foreign Trade (1963): *Exports,* $8,100,000 (chief exports: beef cattle, $3,000,000; sheep, lamb, goats, $951,000; hides and skins, undressed, $470,000; peanuts, $409,000); *imports,* $37,000,000 (chief imports: crude vegetable material, $3,700,000; woven cotton fabrics, $3,600,000; machinery, $3,200,000). *Chief trading partners:* France (took 16% of exports, supplied 49% of imports); Ivory Coast (took 29% of exports, supplied 19% of imports); Ghana (took 38% of exports, supplied 4% of imports).
Transportation: *Roads* (1964), 10,380 miles (40 paved); *motor vehicles* (1964), 7,500 (automobiles, 2,250); *principal airport*—Ouagadougou.
Communications: *Telephones* (1964) 1,900; *televsion stations* (1964), 1; *television sets* (1963), 100; *radios* (1962), 15,000.

Economy. Upper Volta's economy continued to be dependent on the income received by its agricultural workers who made their living in the Ivory Coast, and on external aid. Among aid programs, France pledged a $152,000 loan to modernize the Bobo-Dioulasso telephone system. Nationalist China promised assistance in land reclamation and water conservation projects. Upper Volta and the United States signed an agreement in June to provide guarantees to U.S. investors.

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URANIUM. See MINING—*Mineral Production.*

URBAN RENEWAL. See CITY PLANNING; HOUSING.

URBAN TRANSIT'S NEW LOOK is symbolized by these scale models of new cars which will go into service on San Francisco Bay Area's rapid transit system early in 1970. The cars will be operated automatically from a central computer. Interiors will feature wide upholstered seats, glare-free lighting, and tinted-glass windows.

BAY AREA RAPID TRANS.

URBAN TRANSIT

As of Jan. 1, 1965, the U.S. urban transit industry consisted of 1,152 operating companies. Of these, 1,129 were engaged exclusively in the operation of motor buses; 9 had composite trolley coach and motor bus fleets; 11 had composite fleets including motor buses, electric railway cars, and/or trolley coaches; and 3 used only railway facilities exclusively in passenger service. Six rapid transit systems (elevated and subway operations) are included in the foregoing statistics.

U.S. URBAN TRANSIT INDUSTRY

Operating statistics	1965 (preliminary)	1964 (final)
Operating revenues	$1,427,000,000	$1,408,100,000
Total passengers	8,262,000,000	8,328,000,000
Vehicle miles operated	2,015,000,000	2,015,800,000
Route miles operated[1]	120,000	121,459
Passenger vehicles owned[1]	61,000	61,689
Employees	143,400	144,800
Total payroll	$ 946,400,000	$ 916,900,000

[1] As of December 31.

During 1965 the transit industry carried 8.3 billion passengers a total distance of 2 billion vehicle miles. Some 120,000 miles of route were served by 61,000 passenger vehicles. The facilities to furnish the service required a total investment of slightly more than $4 billion. Average annual earnings for each employee in 1965 was $6,600, and wages and salaries of all employees amounted to $946.4 million. (See also CITY PLANNING.)

ROBERT SLOAN
General Secretary, Urban Transit Association

URUGUAY

A decade of drift toward financial disaster brought Uruguay's inflationary economy to a point of crisis in 1965. The strongly democratic and paternalistic government took an unusually firm stand and declared a state of siege on October 7, after public employees threatened a mass strike. Constitutional guarantees were suspended and press and radio censorship was imposed. Dr. Washington Beltrán, president of Uruguay's 9-man National Council, called for the adoption of a long-range economic stability program and urged that the council be abolished in favor of the presidential system.

Economy. Uruguay's inflationary wage-price spiral caused labor unrest and economic problems during 1965. On March 18 the government was forced to devalue the peso for the second time in four months. The peso's value dropped from 18.70 to 24.0 to U.S.$1. The wage-price spiral, which increased 40% during 1964, was estimated to have risen by 60% to 70% by the end of 1965.

Short-term government debts amounting to about $58 million fell due in 1965, but in August the National Council reached an agreement with U.S. banks to postpone payment of most of that sum. On July 22, pressured by a strike of 214,000 public employees, the government authorized the printing of 1,675 million pesos ($67 million) to pay government salaries and buy food for soldiers and hospital patients.

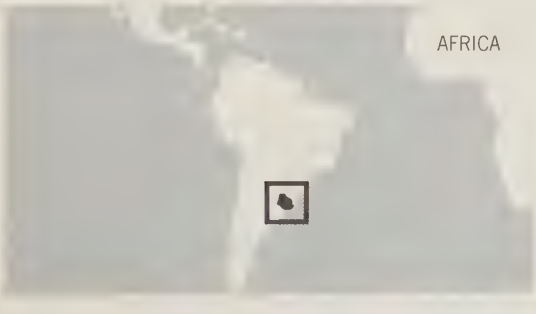
Low wool prices on the international market hurt the economy, although increased exports of beef helped to offset losses. Uruguay withheld 100 million pounds of wool from the international market in 1964 in an effort to bolster sagging prices. Wool prices were less fluctuating in 1965.

Economic and Government Reforms Proposed. President Beltrán announced on June 12 an austerity program designed to stop inflation. However, strikes and labor protests during most of the year prevented implementation of the program. The government made an effort to restore a favorable balance of trade by halting imports of all but indispensable items from June 16 to October 16, causing shortages of raw materials in some industries. With the aid of the Alliance for Progress, the government also prepared a ten-year development plan for Uruguay.

Beltrán also called for constitutional reform to abolish the ineffective 9-man National Council and restore the presidential system. Most members of the National Council were agreed that the question should be decided by plebiscite before the scheduled National Council elections of November 1966.

State of Siege. The government declared a state of siege on October 7 to prevent a threatened strike by

URUGUAY · Information Highlights



Area: 72,172 square miles.
Population: 2,682,000 (July 1, 1964 est.).
Chief City (1963) prelim. census): Montevideo, the capital, 1,202,890.
Government: *Chairman of the National Council*—Washington Beltrán (took office March 2, 1965). *National Assembly*—Senate, 31 members; party seating (1965): Blancos, 15; Colorados, 14. Chamber of Deputies, 99 members; party seating (1965): Blancos, 47; Colorados, 44.
Religious Faiths: Roman Catholics, 83% of population; others, 17%.
Education: *Literacy rate* (1963)—90% of population aged 15 and over. *Total school enrollment* (1959)—411,519 (primary, 313,891; secondary, 66,271; teacher-training, technical, 16,037; higher (1960), 15,320).
Finance (1965 est.): *Revenues*, $218,000,000; *expenditures*, $275,000,000; *public debt* (1964), $103,000,000; *monetary unit*, peso (24 pesos equal U.S.$1).
Gross National Product (1963): $936,000,000.
National Income (1963): $823,000,000; average annual income per person, $323.
Economic Indexes (1964): *Agricultural production* (1956–57=100), 95; *cost of living* (1958=100), 454.
Manufacturing (metric tons): Cement (1964), 412,000; meat (1960), 324,000; gasoline (1963), 272,000; sugar (1964), 53,000.
Crops (metric tons, 1964–65 crop year): Wool (1963), 87,100 (ranks 7th among world producers); wheat, 690,000; grapes (1962–63), 180,000; maize (1963–64), 91,000; oats, 76,000; linseed, 64,000; citrus fruits, 60,000; sunflower seed, 58,000.
Minerals (metric tons, 1963): Lime, 30,000; refractory clay, 3,217; talc, 1,715; quartz, 1,681; iron ore, 1,031.
Foreign Trade (1964): *Exports*, $178,900,000 (chief exports: meat, $74,300,000; wool, $67,500,000; hides, $16,600,000; linseed oil, $2,200,000); *imports*, $197,900,000 (chief imports, 1963: raw sugar, $8,090,000; industrial plants and equipment, $6,590,000; motor vehicle parts and accessories, $6,500,000). *Chief trading partners* (1963): Britain (took 24% of exports, supplied 12% of imports); U.S. (took 12% of exports, supplied 15% of imports); West Germany (took 7% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 23,488 miles (970 paved); *motor vehicles* (1964), 195,300 (automobiles, 112,000); *railways* (1963), 1,866 miles; *merchant vessels* (1964), 18 (111,000 gross registered tons); *state airline*, PLUNA; *principal airport*, Montevideo.
Communications: *Telephones* (1964): 169,463; *television stations* (1964), 4; *television sets* (1964), 175,000; *radios* (1962), 900,000; *newspapers* (1962), 25 (daily circulation, 540,000).

180,000 employees of state-owned communications, utilities, and banks. The government decree established a modified form of martial law, suspended guarantees of individual liberties, and authorized troops to arrest anyone suspected of subversion. Employees of government-owned banks responded by calling for a 72-hour general strike on October 13, to enforce their demands for a 48% wage increase. Most workers, however, remained on their jobs. The government, encouraged by its victory in this test of strength with the powerful unions, took the first step in its economic reform program and put a 25% ceiling on wage increases for the year 1966.

Bank Scandals. The Transatlantic Bank of Uruguay, a private bank, went into bankruptcy on April 22. Subsequent investigation showed irregularities in the bank records. Soon after, two of the country's other private banks were closed by the government and their directors jailed for malpractice.

Strikes closed the government-owned Bank of the Republic and 62 private banks for three weeks in May. The directors of the Bank of the Republic resigned.

Foreign Relations. Uruguay withdrew its delegate to the UN Security Council, Dr. Carlos Maria Velázquez, on June 10. He was charged with exceeding and distorting his instructions in speeches opposing U.S. intervention in the Dominican Republic. His withdrawal was seen as an act of friendship toward the United States.

On January 7 the National Council voted to deny political asylum to two Brazilians who had served in the government of Brazil's ex-president João Goulart. The surprising decision, which was contrary to Uruguay's traditional respect for political sanctuary, helped ease strained relations between the two countries.

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UTAH

In 1965, for the first time in 16 years, Utah had a Democratic governor, and Democrats held control of both houses of the Legislature. One of the most pressing problems facing the Legislature during its regular biennial session from January 11 to March 10 was the reapportionment of congressional and legislative districts.

Reapportionment. In accordance with the U.S. Supreme Court's ruling to equalize populations of congressional and legislative districts, the federal district court ordered Utah to draw up plans for more equitable apportionment. Two measures proposed by a Democratic caucus in the Legislature were passed by both the Senate and House after considerable debate by the Republican minority.

Under the redistricting plan for Utah's two congressional districts, the difference in population was reduced to less than 1.5%, as opposed to a former difference of 28.6%. In reapportioning the state Legislature—a somewhat more personal and difficult task for the legislators—the plan disregarded the state constitutional requirement that allocates each county at least one representative. Counties too small to justify a member were combined with others to make the combined population equal to one member. Under the new plan, the House will retain its 69 members, but the Senate will have one extra seat, bringing its membership to 28.

Other Legislation. A measure calling for a state constitutional convention for constitutional revision was referred to the voters in the 1966 elections. A "Little Hoover Commission," consisting of 12 members, was set up to study the organization and operation of the state government. The commission hired a private firm to conduct the study and prepare a report, due on Jan. 15, 1966, for consideration by the Legislature. It was generally understood that a special session of the Legislature would be called early in the year 1966 to consider what action should be taken as a result of the report.

UTAH · Information Highlights

Area: 84,916 square miles.
Population: 1,008,000 (1965 est.).
Chief Cities (1965 est.): Salt Lake City, the capital (195,000); Ogden (74,500); Provo (39,500); Holladay (33,000); East Millcreek (23,000); Bountiful (25,500); Kearns (21,000); Logan (20,800).
Government: *Chief Officers*—governor, Calvin L. Rampton (Democrat); lt. gov., none; secy. of state, Clyde L. Miller (D); atty. gen., Phil L. Hansen (D); treas., Linn C. Baker; supt. of pub. instr., T.H. Bell; chief justice, F. Henri Henroid. *Legislature* (convened Jan. 11, 1965)—Senate, 27 members (15 Democrats, 12 Republicans); House of Representatives, 69 members (39 D, 30 R).
Education: *School enrollment* (1964–65)—public elementary, 170,442 pupils (5,636 teachers); public secondary, 118,442 pupils (4,800 teachers); nonpublic schools, 7,100 pupils (300 teachers); college and university (fall 1964), 51,086 students. *Public school expenditures* (1964–65)—$109,700,000 ($407 per pupil); average teacher's salary, $5,945.
Public Finance (fiscal year 1965): *Revenues*, $364,342,550 (3.5% sales tax, $59,423,862; motor fuel tax, $23,527,517; federal funds, $107,156,125). *Expenditures*, $377,363,259 (education, $137,729,473; health, welfare, and safety, $39,760,262; highways, $85,926,799). *State debt* (net), $22,044,000 (fiscal year 1964).
Personal Income (1964): $2,139,000,000; average annual income per person, $2,156.
Public Assistance (fiscal year 1965): $21,815,890 to 35,423 recipients (aged, $3,969,733; dependent children, $8,523,455).
Labor Force (employed persons, August 1964): *Agricultural*, 18,400; nonagricultural (wage and salary earners), 282,400 (15% manufacturing, 20% trade, 22% government). *Unemployed persons* (August 1964)—19,300.
Manufacturing (1963): Value added by manufacture, $704,629,000 (transportation equipment, $145,121,000; primary metals, $212,169,000; nonelectrical machinery, $34,118,000; electrical machinery, $12,159,000; fabricated metals, $30,259,000; food and products, $99,375,000).
Agriculture (1964): *Cash farm income*, $160,417,000 (livestock, $116,452,000; crops, $35,440,000; govt. payments, $8,525,000). *Chief crops* (tons)—sweet potatoes, 432,000 (ranks 13th among the states); barley, 166,000 (rank, 13th); peaches, 9,100 (rank, 18th); hay, 1,378,000; wheat, 173,000; potatoes, 68,000; oats, 19,000.
Mining (1964): *Production value*, $391,430,000 (ranks 16th among the states). *Chief minerals* (tons)—coal, 4,720,000 (rank, 10th); uranium, 761,180 (rank, 4th); salt, 371,000 (rank, 9th); copper, 199,588 (rank, 2nd); lead, 40,249 (rank, 3rd); gold, 287,674 troy ounces (rank, 2nd).
Transportation: *Roads* (1963), 34,884 miles (8,422 paved); *motor vehicles* (1964), 538,761; *railroads* (1964), 3,016 miles; *airlines* (1965), 5 (159 airports).
Communications: (1965): *Telephones*, 441,900; *television stations*, 8; *radio stations*, 34; *newspapers*, 5 (daily circulation, 259,649).

Airplane Crashes. On Nov. 11, 1965, a United Airlines 727 Boeing jet airliner crashed and burned at the Salt Lake City Municipal Airport, killing 43 of the 91 persons aboard. Two weeks later, a private charter plane taking some football fans from Salt Lake City to a Brigham Young University game at Albuquerque, N. Mex., crashed about 10 minutes after takeoff. All 13 persons aboard were killed. Five other private planes were lost in Utah during the year.

Demonstrations. Parades and demonstrations for and against U.S. policy in Vietnam were held at the University of Utah. At Brigham Young University a group of students circulated a petition supporting U.S. policy in Southeast Asia and sent it to President Lyndon B. Johnson.

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VANCOUVER

During 1965, Vancouver, the third largest city in Canada (1965 est. pop.: city, 430,665; metropolitan area, 808,000), witnessed the opening of two new educational institutions, the closing of a daily newspaper, and the continued expansion of its port facilities.

Education. Simon Fraser University, located in the suburb of Burnaby, opened in 1965 with 2,300 students. Vancouver's city college also opened, with 4,789 students enrolled in first- and second-year university subjects and in many vocational courses. Enrollment at the University of British Columbia in 1965 totaled more than 16,000 in 19 faculties and schools.

Publishing. The Vancouver *Times*, the only daily newspaper established in a large Canadian city since World War II, ceased publication in 1965. The paper had lost more than $2 million.

Port Facilities. The port of Vancouver operated at full capacity in 1965, with increased shipments of grains, potash, sulfur, lumber, pulp, and paper. The port is the largest shipper of dry cargo on the Pacific coast of North America, and is surpassed only in combined dry and wet tonnage by the port of Los Angeles.

The continued demands on shipping in the port led to a significant expansion of its facilities. Pacific Coast Terminals was spending $11 million to expands its New Westminister wharfs and to double the capacity of its bulk-loading piers at Port Moody. Vancouver Wharfs was investing $15 million to expand loading facilities in North Vancouver. The expansion will include a berth for ships of 40,000 tons capable of loading 45,000 tons of potash per hour. The Saskatchewan Wheat Pool began construction of a $16 million elevator and deep-sea berth in North Vancouver.

The Canadian Pacific Railroad, the largest waterfront property holder in the port, planned an ambitious development project for its own harbor facilities.

Public Finance. Vancouver's total budget for 1964 was $70,306,000, including $21,210,209 for education. On Sept. 29, 1965, the electorate of Vancouver approved a $43.2 million, five-year plan for civic development. The plan included proposals to spend $5 million for hospital extensions, $3.7 million for parks, $2.8 million for a magistrates' court building, and $10 million for a new Georgia Street viaduct.

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VEGETABLES

Production of the 24 principal fresh-market vegetables and the three major types of melons grown in the United States in 1965 was 5% more than in 1964, and 3% above the 1959–63 average. New production highs were set for lettuce and onions. Potato production was up 21%, and sweet potatoes, 17%. The dry bean crop, however, was the smallest since 1957, and dry pea output dropped 15%.

Processed Vegetables. The output of the 10 principal processing crops totaled 8,338,830 tons in 1965. This was 3% more than the tonnage processed in 1964, and 5% more than the 1959–63 average, but 11% less than the record 1962 production. For most processing vegetables, production was up from the previous year. Yields also were higher except for spinach, which was unchanged.

The 10 crops were harvested from 1,630,670 acres. Their value was $400,846,000, well above the 1964 total of $349,181,000, and the 1959–63 average of $313,341,000. California produced 32.1% of the nation's processed vegetables in 1965. Wisconsin ranked in second place with 9.4%, followed by Ohio with 7%, and Minnesota and Illinois with 5% each.

Table 1—U.S. PRODUCTION OF VEGETABLES FOR COMMERCIAL PROCESSING
(In tons)

Vegetables	Average 1959–63	1964	Preliminary 1965
Asparagus	128,690	126,200	119,150
Beans, lima (shelled)	98,960	78,810	94,880
Beans, snap	434,890	469,650	536,520
Beets (for canning)	179,510	180,290	176,560
Cabbage (for sauerkraut)	198,780	162,850	229,590
Corn, sweet (in husk)	1,635,560	1,465,800	1,614,200
Cucumbers (for pickles)	398,590	427,560	444,870
Peas, green (shelled)	494,460	485,260	603,390
Spinach	142,820	146,860	124,310
Tomatoes	4,255,510	4,561,010	4,395,360
Total, 10 crops	7,967,770	8,104,290	8,338,830

Source: Statistical Reporting Service, U.S. Department of Agriculture

Fresh Vegetables. Production of the 27 principal vegetables and melons for the fresh market in 1965 totaled 222,019,000 cwt (hundredweight), up from 214,068,000 cwt in 1964. The vegetables and melons contributing most to the increase were carrots, celery, sweet corn, honeydew melons, lettuce, onions, and watermelons. The 1965 production came from 1,810,040 acres, compared with 1,807,365 acres in the proceding year. The 27 crops were valued at $1,021,766,000, compared with $972,589,000 in 1964 and the 1959–63 average of $870,807,000.

Table 2—U.S. PRODUCTION OF COMMERCIAL VEGETABLES AND MELONS FOR FRESH MARKET
(In hundredweight)

	Average 1959–63	1964	Preliminary 1965
Vegetables:			
Artichokes	445,000	566,000	644,000
Asparagus	1,131,000	1,032,000	1,022,000
Beans, snap	4,379,000	4,166,000	3,974,000
Beets	459,000	409,000	405,000
Broccoli	2,264,000	2,332,000	2,203,000
Brussels sprouts	690,000	730,000	677,000
Cabbage	19,097,000	19,068,000	18,917,000
Carrots	16,833,000	16,370,000	17,432,000
Cauliflower	2,580,000	2,518,000	2,410,000
Celery	14,857,000	14,113,000	14,293,000
Sweet corn	13,207,000	12,528,000	13,473,000
Cucumbers	4,461,000	5,044,000	4,965,000
Eggplant	521,000	543,000	593,000
Escarole	1,011,000	1,041,000	1,044,000
Garlic	343,000	506,000	552,000
Kale	127,000	84,000	84,000
Lettuce	37,752,000	39,044,000	41,048,000
Lima beans, green	407,000	360,000	340,000
Onions	25,445,000	25,904,000	28,079,000
Green peas	235,000	203,000	169,000
Green peppers	3,758,000	3,980,000	3,987,000
Shallots	42,000	26,000	28,000
Spinach	1,369,000	1,173,000	1,167,000
Tomatoes	20,164,000	20,636,000	20,681,000
Total vegetables	171,577,000	172,376,000	178,187,000
Melons:			
Cantaloups	13,118,000	12,667,000	12,164,000
Honeydew melons	1,300,000	1,312,000	1,470,000
Watermelons	29,433,000	27,713,000	30,198,000
Total vegetables and melons	215,428,000	214,068,000	222,019,000

Source: Statistical Reporting Service, U.S. Department of Agriculture.

Potatoes. Production of potatoes in the United States (excluding Hawaii and Alaska) in 1965 was 288,927,000 cwt—21% more than in 1964 and the third largest crop on record, falling about 2% below the record crops of 1946 and 1961. The 1,403,400 acres harvested was the largest acreage since 1961, and 8% above that of 1964. Production by seasons for 1965 was (in hundredweights): winter, 3,659,000; early spring, 4,898,000; late spring, 25,106,000; early summer, 11,926,000; late summer, 29,914,000; and fall, 213,424,000.

Idaho led with 61,695,000 cwt, followed by Maine (35,224,000); California (31,979,000); New York (19,425,000); and Washington (16,560,000).

Sweet Potatoes. The 1965 crop of 17,957,000 cwt was 17% more than in 1964, and 6% above the 1959–63 average. The yields of 89 cwt per acre exceeded both that of 1964 and the 5-year average. The crop was harvested from 202,200 acres, 11% more than in 1964, when harvested acreage was the smallest of record. Louisiana harvested the largest crop among the states—4,234,000 cwt. Other leading states were: North Carolina with 2,970,000 cwt; Virginia (2,000,000); Texas (1,280,000); New Jersey (1,208,000); and Mississippi (1,280,000).

Dry Beans. Production of 16,501,000 bags (100-pound clean basis) was well below the 1964 production of 17,800,000 bags and the 1959–63 average of 19,300,000. Farmers harvested the crop from 1,533,000 acres, up from the 1,452,000 acres harvested in 1964. The yield of 1,076 pounds per acre was the lowest since 1950, and sharply below the 1963 record yield of 1,456 pounds. Michigan again led the states, with 5,562,000 bags.

Table 3—U.S. PRODUCTION OF FROZEN VEGETABLES
(In pounds)

Product	1963	1964
Asparagus	30,315,453	31,054,122
Beans, green regular cut	90,969,535	108,613,846
Beans, green French cut	63,649,017	60,679,643
Beans, whole green	1,701,339	4,500,414
Beans, green, Italian	8,859,519	7,619,798
Beans, wax	5,018,502	6,044,091
Broccoli	135,334,293	129,817,384
Brussels sprouts	42,272,005	47,476,071
Butter beans	8,538,252	11,547,355
Carrots, diced	54,007,548	48,864,577
Carrots, sliced	15,764,930	15,082,153
Cauliflower	40,676,728	43,595,792
Collards	8,848,286	9,002,421
Corn, cut	168,156,430	159,845,615
Corn on cob	11,747,641	27,756,972
Kale	4,788,818	4,013,067
Lima beans, baby	61,707,280	60,822,868
Lima beans, Fordhook	56,000,020	55,665,020
Mixed vegetables	50,950,405	48,179,422
Mustard greens	6,112,530	8,286,711
Okra	21,143,883	35,451,000
Peas, blackeye	15,639,338	23,451,934
Peas, green	344,783,838	336,930,490
Peas and carrots	16,158,020	21,859,835
Potato products	861,537,180	1,117,882,946
Pumpkin and cooked squash	12,189,779	11,242,838
Rhubarb	5,520,370	5,758,269
Spinach	119,767,754	126,956,946
Squash, summer	8,880,604	6,316,433
Succotash	4,955,950	4,254,275
Sweet potatoes and yams	7,985,620	12,333,180
Turnip greens	14,231,667	20,574,626
Miscellaneous vegetables	24,163,946	27,718,687
Total	2,322,376,480	2,639,198,801

Source: National Association of Frozen Food Packers.

Dry Peas. Production of dry peas in 1965 totaled 4,050,000 bags (100-pound clean basis), 15% less than in 1964 and 6% below the 1959–63 average. The average yield of 1,746 pounds per acre was the highest on record, exceeding the previous high of 1964 by 13%. Washington, with 2,204,000 bags, produced the largest dry pea crop in 1965.

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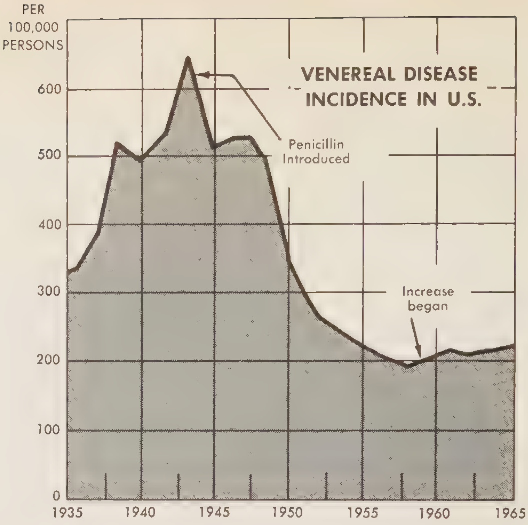
VENEREAL DISEASES

In the fiscal year ended June 30, 1965, state health departments reported a total of 425,273 cases of venereal diseases to the U.S. Public Health Service. While the total number of spyhilis cases dropped slightly during this period, the number of primary and secondary infections increased. However, there was a sustained decrease in the syphilis death rate.



Syphilis. In the fiscal year 1965 there were 113,018 cases of syphilis reported in the United States, representing decreases of 5,229 from the 1964 total of 118,247, and of 15,432 from the 1963 total of 128,450. Cases in the infectious primary and secondary stages numbered 23,250, an increase of 2.3% over 1964, and the largest number reported in the United States since 1950. Reported cases of early infectious syphilis among persons between 15 and 19 years of age rose from 1,163 in 1956 to 3,595 in 1964, an increase of 209%.

The number of cases in the later stages of syphilis declined for the third consecutive year to 89,768 in the fiscal year 1965. The decrease in number lowers the reservoir of untreated cases, estimated at 1.2 million.

Deaths from syphilis continued to decrease. Data for 1963 show 2,666 deaths, as against more than 7,500 in 1950. In tax-supported mental institutions in the United States, the number of patients with psychoses due to syphilis remained at 18,680. Maintenance and care for these patients cost taxpayers nearly $50 million a year.

Gonorrhea. Reported cases of gonorrhea in the United States have increased yearly, at a rate slightly greater than the population growth. The 310,155 cases of gonorrhea reported in fiscal year 1965 represented an increase of 43.3% over the 1957 figure. The 1965 total was the largest since 1950.

Other Venereal Diseases. Cases of chancroid and granuloma inguinale declined in incidence in the fiscal year 1965. There were 1,083 reported chancroid cases and 144 granuloma inguinale cases. Lymphogranuloma venereum cases increased to a total of 873, as compared with 543 cases reported in the fiscal year 1964.

Disease Control Activities. From the fiscal years 1955 to 1965 there has been an annual increase in the number of early infectious syphilis cases brought to treatment through syphilis epidemiology. In 1965, 8,800 cases, or 38% of the reported primary and secondary syphilis cases, were treated by health department services.

During the year, three states—Montana, West Virginia, and Wyoming—adopted laws or regulations requiring laboratories to report findings suggestive of syphilis to state health departments. Twenty-six states now have such regulations. In the fiscal year

1965, 653,475 reactive tests for syphilis were reported in the United States. From these tests, 79,972 cases of syphilis were identified.

Advances in immunology and serologic tests for syphilis, as well as improvements in anesthesia drugs for primates, have made it possible for researchers to use great apes in venereal disease experiments. The object of these experiments is to develop a method of immunizing humans against venereal disease.

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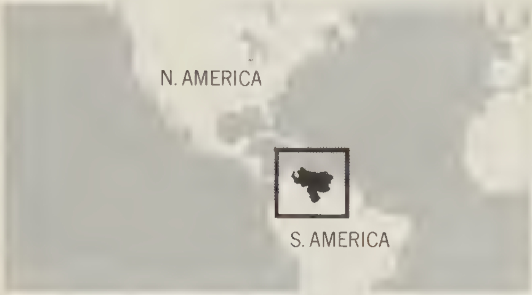
VENEZUELA



The strong coalition government of President Raúl Leoni, which enjoyed the support of the armed forces, remained relatively stable during 1965, although it had to combat many outbreaks of leftist terrorist activity. The government worked hard to improve Venezuela's economy during the year.

Terrorist Activities. The Armed Forces for Liberation (FALN), a far-left, Castro-oriented organization, was responsible for sporadic antigovernment harassment. The FALN conducted guerrilla raids on government installations in the interior and was responsible for bombings, burnings, and murders in Caracas and other urban centers. Symptomatic of the uneasy political environment was the fatal shooting by Caracas police in February of a Peace Corps worker in the mistaken belief that he was a terrorist. In September, 10 policemen were murdered in as many days. During the same month the government arrested 11 FALN leaders. In addition to political agitation, Caracas suffered from a crime wave in 1965.

Communist Plot Charged. In April, Venezuelan authorities arrested an Italian doctor and two other persons, charging that they had brought $330,000 into Venezuela to finance a Communist conspiracy against the government. Venezuela protested strongly to the Italian government and accused Moscow of complicity in the plot. In connection with the incident, 40 persons were arrested, including Miguel Capriles, publisher of three newspapers and a foe of the administration. Most of those arrested were later released.

Jimenez Tried. Former President Marcos Pérez Jiménez, who was overthrown in 1958, was tried in Caracas on the charge of embezzling $9 million while he was in office. No verdict had been reached at year's end.

Government. The cabinet formed by President Leoni late in 1964 included three members of his own Democratic Action party; three from the Democratic National Front; and four independents. The Christian Socialist party, formerly a coalition partner and now Venezuela's second largest party, adopted an independent policy by supporting the government on some issues, and on other issues taking the role of an opposition party.

VENEZUELA · Information Highlights

Area: 352,143 square miles.
Population: 8,722,000 (June 30, 1965, est.).
Chief Cities (1964 est.): Caracas, the capital, 1,589,411 (metropolitan area); Maracaibo, 502,693; Barquisimeto, 227,357; Valencia, 183,505.
Government: *President*—Raúl Leoni (took office March 11, 1964). *Congress*—Senate, 50 members; party seating (1965): Democratic Action (AD-GOB), 23; Christian Socialist (COPEI), 9; Republican Democratic Union (URD), 7; Democratic National Front (FND), 5; others, 6. Chamber of Deputies, 179 members; party seating (1965): AD-GOB, 65; COPEI, 40; URD, 29; FND, 22; others, 23.
Religious Faiths: Roman Catholics, 93% of population; others, 7%.
Education: *Literacy rate* (1961)—66% of population aged 15 and over. *Total school enrollment* (1962–63)—1,607,899 (primary, 1,346,751; secondary, 137,823; teacher-training, 29,018; technical, 59,651; university, 34,656).
Finance (1965 est.): *Revenues*, $1,550,000,000; *expenditures*, $1,513,000,000; *public debt*, $503,000,000; *monetary unit*, bolivar (4.50 bolivars equal U.S.$1).
Gross National Product (1964): $7,068,000,000.
National Income (1964): $5,893,000,000; average annual income per person, $699.
Economic Indexes (1964): *Industrial production*, 139 (1958=100); *agricultural production*, 150 (1956–57=100); *cost-of-living*, 107 (1958=100).
Manufacturing (metric tons, 1964): Gasoline (1963), 6,085,000; cement, 1,867,000; sugar, 352,000; crude steel, 324,000; wheat flour, 303,600; beer (1963), 248,800; meat (1963), 177,000.
Crops (metric tons, 1964–65 crop year): Coffee, 48,000 (ranks 16th among world producers); cocoa beans, 21,000 (world rank, 9th); maize, 475,000; cassava (1963–64), 342,000; sweet potatoes and yams (1963–64), 96,000; sesame, 46,900; dry beans (1963–64), 38,000; cotton lint, 12,000.
Minerals (metric tons, 1964): Iron ore, 15,650,000 (ranks 9th among world producers); crude petroleum, 1,241,782,000 barrels (world rank, 3rd); natural gas, 250,902,000,000 cubic feet (world rank, 7th); gem diamonds, 58,000 carats (world rank, 14th); salt, 200,000; lime, 70,000; bituminous coal, 38,000.
Foreign Trade (1964): *Exports*, $2,742,000,000 (chief exports, 1963: crude petroleum, $1,288,000,000; petroleum products, $525,000,000; iron ore, $73,000,000; coffee, $17,000,000); *imports*, $1,272,000,000 (chief imports, 1963: nonelectrical machinery, $156,000,000; iron and steel, $60,800,000; electrical machinery, $60,600,000). *Chief trading partners* (1963): U.S. (took 33% of exports, supplied 54% of imports); Netherlands Antilles (took 23% of exports, supplied 0.3% of imports); Britain (took 8% of exports, supplied 6% of imports).
Transportation: *Roads* (1964), 29,949 miles (8,215 paved); *motor vehicles* (1964), 394,495 (automobiles, 343,536); *railways* (1963), 220 miles; *merchant vessels* (1964), 35 (277,000 gross registered tons); *national airlines*, LAV, AVENSA; *principal airport*, Caracas.
Communications: *Telephones* (1964): 242,264; *television stations* (1964), 20; *television sets* (1964), 850,000; *radios* (1961), 1,300,000; *newspapers* (1963), 27.

Foreign Affairs. President Leoni was host in September to President Giuseppe Saragat of Italy. The two heads of state agreed in principle on a new treaty calling for the intensification of trade and technical aid between Venezuela and Italy. Poland and Venezuela entered into an agreement whereby

VENEZUELAN DEMONSTRATORS marching in Caracas in April, protest crime and corruption in the government.

WIDE WORLD

DESEMPLEO
CRIMEN
CORRUPCION
CARCEL

Venezuela will purchase $2.5 million worth of Polish agricultural machinery.

Venezuela's intention to join the Latin American Free Trade Association (LAFTA) was announced at the organization's meeting in Uruguay in November. Because Venezuela is heavily dependent on its oil revenue, it led a drive by the Organization of Oil Exporting Countries to establish petroleum production and marketing quotas in order to maintain satisfactory world prices.

Venezuela continued to press its claim to the Esequiba territory, a 60,000-square-mile, bauxite-rich area of British Guiana. Although both British Guiana and Britain rejected the claim, Britain indicated its willingness to continue discussions. Venezuela again appealed to the United Nations to support its claims to the territory.

Economic Developments. Venezuela's 3.5% annual increase in population continued to tax the government's ability to provide adequate housing, health facilities, and schools. In spite of a 20% increase in construction activity, 11% of the labor force was unemployed in 1965. In an effort to alleviate these problems, the government contracted for its third $10 million loan from the Inter-American Development Bank. The loan will be used to finance the construction of low-cost housing.

The government also announced a new three-year plan for industrial development. The plan, to cost $550 million, of which the government will supply $308 million, will provide 20,000 new jobs.

Construction began in 1965 on the Guri Dam on the Caroní River. The dam will supply 6 million kilowatts of power to the Guayana industrial complex at the confluence of the Orinoco and Caroní rivers, where 80 separate industrial projects are in various stages of development. Reynolds Aluminum and the Venezuelan government agreed to invest $10 million each in a new aluminum plant in Guayana with an annual capacity of 100,000 tons. The population of the new city of Guayana, now about 75,000, is expected to reach 250,000 by 1970.

Venezuela's $40 million automotive industry showed considerable vigor in 1965, producing an estimated 50,000 completed units, as compared with 44,900 units in 1964.

The government claimed to have distributed land to over 80,000 families since the beginning of the agrarian reform program in 1959. It was hoped that the reform would be completed by 1970.

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VERMONT

The 1965 "suicide legislature," under court order to reapportion itself and then adjourn for new elections, managed to meet the July 1 deadline for reapportionment that had been ordered by the Vermont Supreme Court in 1964. Democrats, expecting to gain seats in the newly reapportioned legislature, were stunned by a sweeping Republican victory in the November special election.

Reapportionment. The General Assembly presented three possible reapportionment plans to a three-member federal court on July 1. The court accepted a plan calling for a 150-member House of Representatives chosen from 71 districts, and a 30-member Senate chosen from 28 districts. Populous districts were subdivided to prevent any citizen from voting for more than two representatives. The court then ordered a primary election on October 19, and a general election on November 23.

Elections. Democratic hopes were high before the special general election on November 23, and they contested more seats than they usually do in this traditionally Republican state. The voters, however, lived up to their reputation for independence, and handed the Republicans 115 of the 150 House seats, and 23 of the 30 Senate seats. Conceding a "horrendous" defeat, Democratic Gov. Philip H. Hoff rewrote proposed administration bills intended for a Democratic-controlled Assembly.

Legislation. The new General Assembly convened on Jan. 6, 1965. It accepted almost unchanged the executive budget of $132,000,000 for 1965–66, but added $8,000,000 for the second year of the biennium. Salaries of officials were increased, including the governor's salary, which was raised to $20,000 per year.

Money was also provided to speed up a statewide effort to equalize town property assessment rates, a project undertaken in 1964 to provide a basis for allocation of state education grants. The 1965 Assembly, however, passed a bill providing that each town receive the same grant-in-aid that it had in 1964, and forbidding the reduction of these grants by future legislatures.

The Assembly authorized increased state bond issues, bringing the total of authorized and sold bonds to nearly $100,000,000. It also authorized funds for a student loan program, and for a district state office building in Burlington. In other legisla-

VERMONT · Information Highlights

Area: 9,609 square miles.

Population: 396,000 (1965 est.).

Chief Cities (1965 est.): Montpelier, the capital (8,900); Burlington (36,300); Rutland (18,500); Brattleboro (11,800); Barre (10,100); Saint Albans (8,800); Bennington (8,000); South Burlington (8,000).

Government: *Chief Officers*—governor, Philip H. Hoff (Democrat); lt. gov., John J. Daley (D); secy. of state, Harry H. Cooley (D); atty. gen., John P. Connarn (D); treas., Peter J. Hincks (D); comm. of educ., Richard A. Gibboney; chief justice, James S. Holden. *Legislature*—General Assembly (convened Jan. 6, 1965); Senate, 30 members (23 Republicans, 7 Democrats); House of Representatives, 150 members (115 R, 35 D).

Education: *School enrollment* (1964–65)—public elementary, 57,500 pupils (2,160 teachers); public secondary, 28,500 pupils (1,220 teachers); nonpublic schools, 20,600 pupils (860 teachers); college and university (fall 1964), 12,749 students. *Public school expenditures* (1964–65)—$35,000,000 ($438 per pupil); average teacher's salary, $5,500.

Public Finance (fiscal year 1965): *Revenues*, $131,994,533 (motor fuel tax, $9,968,001; federal funds, $38,693,935). *Expenditures*, $135,281,659 (education, $19,596,268; health, welfare, and safety, $27,709,089; roads and highways, $38,276,116). *State debt*, $64,299,000 (June 30, 1965).

Personal Income (1964): $867,000,000; average annual income per person, $2,119.

Public Assistance (fiscal year 1965): $8,338,557 to 12,147 recipients (aged, $5,026,540; dependent children, $1,752,466).

Labor Force (employed persons, mid-July 1965): *Agricultural*, 21,100; *nonagricultural* (wage and salary earners), 126,400 (30.9% manufacturing, 18.1% trade, 15.0% government); *unemployed persons* (mid-July 1965)—6,000.

Manufacturing (1963): Value added by manufacture, $309,416,000 (paper and allied products, $29,889,000; primary metals, $4,499,000; nonelectrical machinery, $67,118,000; electrical machinery, $19,938,000; fabricated metals, $6,208,000; food and products, $35,759,000; stone, clay, and glass products, $26,057,000).

Agriculture (1964): *Cash farm income*, $128,157,000 (livestock, $111,420,000; crops, $14,356,000; government payments, $2,381,000). *Chief products* (tons)—maple syrup, 486,000 gallons (ranks 2nd among the states); hay, 1,038,000; apples, 22,100; potatoes, 18,000; oats, 8,400; corn for grain, 1,700.

Mining (1964): *Production value*, $26,127,000 (ranks 44th among the states). *Chief minerals* (tons)—stone, 2,070,000; sand and gravel, 1,764,000.

Transportation: *Roads* (1965), 13,737 miles (4,589 surfaced); *motor vehicles* (1965), 188,104; *railroads* (1965), 826 miles; *airlines* (1965), 2 (48 airports).

Communications (1965): *Telephones*, 158,400; *television station*, 1; *radio stations* (1964), 17; *newspapers*, 9 (daily circulation, 100,347).

tion the Assembly abolished the municipal courts, replacing them with 12 new district courts; abolished the death penalty, except for the murder of police officers; and authorized stronger billboard regulations. A legislative council was created to speed up introduction and study of bills. A conservation and development commission was formed to study development of more state recreational areas.

ANDREW E. NUQUIST
Chairman, Department of Political Science
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VETERANS

Living veterans of U.S. military service totaled 21,834,000 at mid-1965. Of these, more than 14,900,000 served in World War II, including 1,150,000 who also served in the Korean War. Veterans who had served in the Korean War only totaled 4,568,000, and veterans of World War I totaled 2,100,000. In addition, 15,000 Spanish-American War veterans were still living. One of the last eight veterans of the Indian Wars died on July 5. There also were 161,000 veterans who served in peacetime.

Veterans affairs are to a large extent handled by the Veterans Administration (VA), an independent agency of the United States government, established to administer the benefits prescribed by law for veterans and their dependents.

Compensation and Pensions. A factor in maintaining the health of the U.S. economy was the more than $4 billion paid in fiscal year 1965 to 3,216,920 living veterans and to dependents of 1,422,033 deceased veterans.

Insurance. The VA Insurance Service was administering 5,800,000 policies of GI insurance, with a total face value of more than $39 billion at the close of fiscal year 1965. Veterans who held the policies paid more than $570 million in premiums during the year and received $222.7 million in dividends. These dividends are essentially a return to the policyholders of excess payments on their premiums. The excess of payments exists because the death rate of veterans continues to be lower than the rate used in the mortality tables upon which the law requires the amount of the premium to be calculated.

A new law enacted in the autumn of 1965 set up a servicemen's group life insurance program that provides a maximum of $10,000 life insurance for servicemen. The new insurance is underwritten by private companies, and the extra hazard cost is paid by the U.S. government.

GI Loans. The GI bills of both World War II and the Korean War provide loan programs for veterans. Up to 60% of the total home loans veterans secure from private lenders is guaranteed by the VA, with a maximum guaranty of $7,500. Other real estate loans may be guaranteed up to 50% of cost, with a maximum guaranty of $4,000. Business loans are guaranteed up to 50%, with a $2,000 guaranty ceiling. Direct loans are made by the VA in areas where ordinary lending facilities are not available. Although eligibility for World War II and Korean War veterans has begun to expire, 170,253 veterans received VA-guaranteed or VA-insured loans in the 1965 fiscal year. As of July 1, 1965, the total loans issued under this program amounted to 6,635,788, with a total face value of $61.3 billion.

Eligibility for GI loans to World War II and Korean War veterans extends for a period of 10 years after the veteran's discharge from active duty, plus an additional year for each three months of active wartime service. The deadline for all World War II veterans' eligibility is July 25, 1967, and for Korean veterans, Jan. 31, 1975.

Education and Training. All training under the Korean GI Bill was completed on Jan. 31, 1965. In addition to the approximately 7,800,000 World War II veterans who had received education and training under the GI Bill, some 2,400,000 Korean veterans also received training, bringing the total to more than 10,200,000.

Vocational Rehabilitation. Approximately 703,800 disabled veterans of World War II, the Korean War, and peacetime service have received rehabilitation training to help them to overcome handicaps resulting from injuries or diseases incurred in the service.

Medical and Hospital Care. In the fiscal year 1965 the VA Department of Medicine and Surgery had 136,759 employees and operated 168 hospitals, with a total capacity of 120,509 beds, 211 outpatient clinics, and 18 domiciliaries. During the year, 606,000 patients were discharged from VA hospitals. The average daily patient load was 109,183 in VA hospitals, and an additional 2,599 veterans were patients in private hospitals at the VA's expense. VA outpatient clinics received 5,987,225 visits.

A significant part of the nation's medical research is conducted in VA hospitals. Since mental illness accounts for half the veterans in VA hospitals, research in psychiatric treatment has been emphasized. The field of gerontology also receives special attention, with a view toward returning older patients to communities as independent, self-supporting, contributing members of society.

Veterans with compensable, service-connected injuries receive prosthetic appliances from the VA. Artificial limbs and eyes are fitted, and the veterans are trained in their use and care. Hearing aids are provided, as are braces, trusses, orthopedic shoes, special clothing, crutches, canes, wheelchairs, eyeglasses, and guide dogs and electronic equipment for the blind. Severely disabled veterans receive "wheelchair" home grants, and they also may receive grants toward the purchase of automobiles with special controls.

Guardianship. Guardianship service for incompetent veterans, minor dependents, and incompetent dependents is provided by the VA. In the fiscal year 1965, a total of 567,387 persons received guardianship care.

Education of Orphans. The Orphans Educational Assistance Program aids children of veterans who die of diseases or injuries incurred or aggravated in wartime service or in certain especially hazardous peacetime service. In 1965 a new law made children of completely disabled veterans eligible for aid. During the 1965 fiscal year, 11,600 children enrolled in the program for the first time, bringing the number who have benefited from this form of aid to 78,200. Most of the students receiving help are enrolled in institutions of higher learning. However, an eligible orphan may train in a technical or business school if he has the approval of his VA counselor. With few exceptions, students benefiting from the assistance program are between the ages of 18 and 23. They receive up to 36 months of training, and full-time trainees are allowed $110 a month.

WILLIAM J. DRIVER
Administrator of Veterans Affairs

VETERANS ORGANIZATIONS. See names under SOCIETIES AND ORGANIZATIONS.

UPI PHOTO BY STEVE NORTHUP

VIETNAMESE MOTHER AND CHILDREN, found after Communists overran their village, reflect the horror and anguish of the war.

VIETNAM

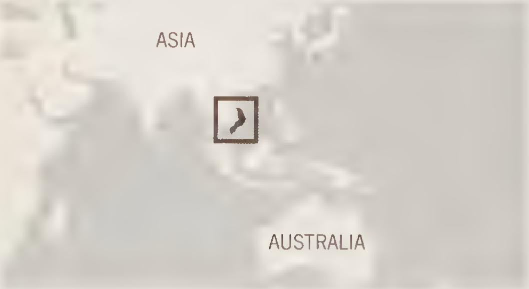
Broadening war, uncertainty over its future course, and repeated efforts to find a path to a negotiated settlement characterized the situation in Vietnam during 1965. The conflict intensified between American-backed forces of the government of South Vietnam (Republic of Vietnam) and insurgent forces supported by North Vietnam (Democratic Republic of Vietnam), the Soviet Union, and Communist China. By the year's end, it had become a major political issue in the United States, and it threatened to divide both the West and the Communist world.

SOUTH VIETNAM (REPUBLIC OF VIETNAM)

Developments in South Vietnam focused on (1) continued political instability; (2) heavy intensification of the war between South Vietnamese government forces and Vietcong (Communist) guerrillas; and (3) increased involvement of U.S. and North Vietnamese forces in the conflict.

Political Instability. The government of Chief of State Phan Khac Suu and Premier Tran Van Huong failed to last through the first month of 1965. They had taken office in the fall of 1964, under a charter drawn up by the High National Council, a provisional legislature created by the military leaders in September. The disbanding of the High National Council by younger members of the Armed Forces Council, on December 20, indicated that the civilian government lacked support which it needed to stay in power. Although it managed to survive a few more weeks, it finally lost the backing of the armed forces leaders, who replaced it on January 27 with

SOUTH VIETNAM · Information Highlights



Area: 65,948 square miles.
Population: 15,715,000 (July 1, 1964 est.).
Chief City (1963 est.): Saigon, the capital, 1,336,000.
Government: *Chief of State*—Maj. Gen. Nguyen Van Thieu; *Premier*—Air Vice Marshal Nguyen Cao Ky; *National Leadership Committee* (10 members) exercises supreme executive and legislative powers.
Religious Faiths: Buddhists, 65% of population; Roman Catholics, 9%; others, 26%.
Finance (1964 est.): *Revenues*, $589,000,000; *expenditures*, $1,060,000,000; *monetary unit*, piastre (35 piastres equal U.S.$1).
Education: *Literacy rate* (1960)—90% of population. *Total school enrollment* (1961)—1,606,183 (primary, 1,357,173; secondary, 228,480; teacher-training, 1,497; technical, 4,237; higher, 14,796).
Gross National Product (1964): $3,103,000,000.
National Income (1964): $2,529,000,000; average annual income per person, $161.
Economic Index: *Cost of living* 1964, 124 (1958=100).
Manufacturing (metric tons, 1964): Cement, 75,000; beer (1963), 73,600; fuel briquets and packaged fuel, 55,000; sugar (1963), 28,000; cotton yarn, 7,800.
Crops (metric tons, 1963–64 crop year): Rice (1964–65), 5,031,000 (ranks 9th among world producers); rubber, 76,200 (world rank, 5th); cassava, 389,000; sweet potatoes and yams, 300,000; dry beans, 14,000; jute and allied fibers, 5,000; tea, 4,700; coffee, 3,600.
Minerals (metric tons): Anthracite coal (1964), 149,000 (ranks 19th among world producers); salt (1963), 128,000; kaolin (1963), 4,471.
Foreign Trade (1964): *Exports*, $48,000,000 (chief exports: rubber, $33,300,000; rice, $5,300,000); *imports*, $298,000,000 (chief imports, 1963: iron and steel, $30,400,000; nonelectrical machinery, $24,800,000; petroleum products, $19,400,000). *Chief trading partners* (1963): U.S. (took 1% of exports, supplied 37% of imports); France (took 24% of exports, supplied 11% of imports); Japan (took 6% of exports, supplied 10% of imports).
Transportation: *Roads* (1964), 12,320 miles (3,188 paved); *motor vehicles* (1964), 66,112 (automobiles, 42,665); *railways* (1963), 794 miles; *merchant vessels* (1964), 1 (3,000 gross registered tons); *principal airport*, Saigon.
Communications: *Telephones* (1964): 19,300; *radios* (1961), 125,000; *newspapers* (1962), 28 (daily circulation, 560,000).

JERRY ROSE—PIX

SOUTH VIETNAMESE AIRBASE near Danang is guarded by soldiers manning strategic hilltop position.

a new regime controlled by the military. Third Deputy Premier Nguyen Xuan Oanh was named acting premier, and Phan Khac Suu agreed to stay on as acting chief of state.

On February 16, with the approval of the military leaders, a civilian "unity" cabinet took office under Phan Huy Quat, a well-known political figure of North Vietnamese origin. The Quat government was South Vietnam's ninth in 16 months. Three days later a military revolt headed by Col. Pham Ngoc Thao, a fiery Catholic officer, jolted the regime and the Armed Forces Council. Thao's objective was to "end the dictatorship" of Lt. Gen. Nguyen Khanh, the council chairman and commander of the armed forces. The general, however, aided by the commander of the air force, Air Vice Marshal Nguyen Cao Ky, put down the revolt the same day. That night, 15 young generals met with Premier Quat at Bien Hoa Air Base near Saigon and voted to remove Khanh from both of his posts, thus ending his 13-month political and military dominance. Replaced by Lt. Gen. Tran Van Minh as acting commander in chief, Khanh left Vietnam to serve as an "ambassador at large" to the United Nations. The abortive coup had changed the composition of the military leadership, but had left the Quat regime intact and in charge of civil administration.

Popular morale in South Vietnam during the winter of 1964–65 was extremely low. A war-weary population was systematically terrorized by Vietcong forces to the point that fear and defeatism were spreading dangerously, while the Saigon government's zone of effective rule was being progressively whittled down by Communist military advances. Furthermore, the political maneuvering of ranking military leaders spread to junior officers, cutting deeply into army morale and hurting military effectiveness.

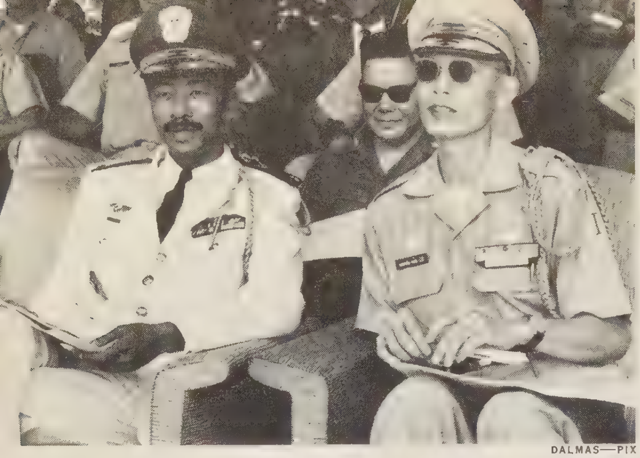
The Quat government proved a tonic, for the moment at least. Its first acts coincided with an upsurge in American military strength and power in South Vietnam, an intensification of the war against the Vietcong, and the bombing of North Vietnam. The result was a discernible easing of tension in the south and a clear improvement in popular morale. The Armed Forces Council dissolved itself and turned over "full control of the nation" to the Quat cabinet on May 6. The council, announcing that it was leaving politics altogether, stated: "As the war becomes more decisive, the military leaders must concentrate all their efforts toward its prosecution. They cannot continue to carry out political tasks forced upon them in the past."

Political activities by military officers obviously had hampered the prosecution of the war. Some army officers still cherished political ambitions, but they were sensitive to growing public criticism and ridicule. The military situation, public opinion, and the apparent stability of the Quat government restrained these officers. In May the government held local elections in the areas it still controlled. Of the 4.5 million registered voters, roughly 3.5 million (73%) cast their ballots, in defiance of Communist efforts to sabotage the voting.

But political stability could not be maintained for long. Opposition groups, including militant Catholic refugees, attacked Premier Quat for having sponsored "discriminatory religious legislation," and for favoring a neutralist solution to the war. On June 12 his cabinet resigned, and the next day military leaders formed the National Leadership Committee to exercise executive and legislative powers.

The committee, headed by Maj. Gen. Nguyen Van Thieu, named one of its members to be the new premier—Air Vice Marshal Nguyen Cao Ky. He took office on June 19, and General Thieu replaced Phan Khac Suu as chief of state. Once again the armed forces had brushed aside civilian authority. But this time, as the war continued to grow increasingly intense, the likelihood of their again surrendering power to the politicians appeared dim. As the year ended, the military leadership seemed securely in control of the government, although civilian aspirants to power were clearly restive and unhappy.

A problem of considerable magnitude grew out of



DALMAS—PIX

MILITARY LEADERS OF SOUTH VIETNAM include Air Vice Marshal Nguyen Cao Ky (left), who became premier on June 19, and Brig. Gen. Nguyen Huu Co (right), who took the post of minister of war and defense in the new cabinet.

NGUYEN CAO KY, air vice marshal and commander of the South Vietnamese air force, took office as premier on June 19, 1965. Succeeding the civilian premier, Phan Huy Quat, he presented a 26-point program which stressed that national sovereignty resides in the armed forces until a permanent constitution is written. He did not have dictatorial powers, however, because major governmental decisions were made collectively by the National Leadership Committee, headed by Maj. Gen. Nguyen Van Thieu.

Ky was born on Oct. 8, 1930, in northern Vietnam, then part of French Indochina. The French gave him his pilot training in the early 1950's. In 1960–61, when he was a South Vietnamese air force major in command of a transport squadron, he flew dangerous missions to drop saboteurs and guerrillas into North Vietnam. Lt. Gen. Nguyen Khanh named him air force commander in 1964. Under Ky's leadership, and with U.S. aid, air force strength increased steadily. Ky personally commanded the first South Vietnamese air strike against targets in the north, on Feb. 8, 1965, and was slightly wounded in action.

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the flight of 700,000 peasants from inland villages and isolated farmsteads in central Vietnam to the coastal cities and towns. Victims of the war, the refugees preferred life in the difficult conditions of a refugee camp, protected by government forces, to taking their chances with the Vietcong in their native villages. The necessity of providing for them constituted a serious challenge to the Saigon regime. It equaled in political importance the problem presented by the influx of 860,000 refugees from North Vietnam in 1954.

Intensification of the War. What had been a guerrilla war, confined to South Vietnam, took on a different complexion in 1965. The war expanded in some areas of the south into large-scale assaults by uniformed North Vietnamese troops, who were equipped with massive quantities of weapons supplied by China and other Communist-bloc nations. Before the end of the year, responsible authorities in Saigon and Washington claimed that as many as 12 North Vietnamese regular army regiments were operating within South Vietnam. They asserted that Communist infiltration over the Ho Chi Minh trail, which leads from North Vietnam into the south through the jungle of eastern Laos, approximated 4,500 men per month. Combined Vietcong and North Vietnamese troop strength in December was estimated at more than 100,000 regulars and as many irregulars (part-time guerrillas).

Battle casualties on both sides mounted during the year. U.S. combat deaths in 1965 totaled more than 1,350, as compared with 136 killed in combat in 1964. The number was still but a fraction of the 11,100 deaths suffered by South Vietnamese government troops, who continued to bear the brunt of the fighting. Governmental authority was surprisingly resilient, considering the large number of local and district civilian officials who had been killed or

MEMBERS OF U.S. 101st AIRBORNE BRIGADE cross river near Ben Khe, South Vietnam, in September. American forces in Vietnam were increased to 180,000 in 1965.

UPI

BRUNT OF THE FIGHTING is borne by South Vietnamese government troops, one of whom, wounded, is evacuated from the battlefield near Hiep Duc. Communists who had captured the village impaled local officials and their families on stakes as warning to Vietnamese loyal to Saigon.

UPI

kidnapped since 1959. During the first nine months of 1965, 1,100 South Vietnamese officials were eliminated by the Vietcong. According to Saigon, 34,585 Vietcong were killed in 1965.

United States Involvement. In reaction to increasing external support for the Vietcong, the United States stepped up its assistance to South Vietnam. The number of U.S. military and air force personnel in the Republic of Vietnam rose from about 20,000 in January 1965 to 190,000 on Jan. 12, 1966. An additional 50,000 U.S. servicemen patrolled the seas and skies of the Southeast Asian peninsula as part of the U.S. 7th Fleet. A corresponding augmentation of weapons and aircraft, plus the dispatch to Vietnam of the 1st Cavalry (Airmobile) Division, brought several thousand aircraft to that country and wrought another alteration in the style of warfare. Heightened mobility, gained especially through the increased use of helicopters, made possible almost instant response by American and South Vietnamese forces to many Vietcong attacks. To counter this temporary advantage, Communist guerrillas introduced antiaircraft machine guns and cannon into the war in the south.

Impacts of the enlarged U.S. participation in the war were felt throughout Vietnam. In South Vietnam, the influx of huge numbers of American servicemen stimulated inflation in the Vietnamese economy. At the same time, the Communists made a methodical effort to cut roads, canals, and other transport arteries and thus prevent peasants from bringing their rice and other produce to market, while tightening a blockade of urban centers dependent on those deliveries for their food supplies. The Communist campaign also had an inflationary effect.

To meet the resulting problems, the Vietnamese and U.S. governments instituted an air- and sealift to carry shipments of food and other supplies from Saigon and abroad to Da Nang, Nha Trang, and other coastal cities, and to towns in the interior. Indeed, over much of South Vietnam, air travel was often the only sure means of communication, and it was facilitated by a network of more than 175 airfields and airstrips across the Republic of Vietnam. Heavier logistical support required by the increasing numbers of armed men demanded in turn installations capable of sustaining them. It thus became necessary to build a base of logistical support for the U.S. forces. Major air installations at Saigon, Bien Hoa, Da Nang, and Soc Trang provided such facilities. Naval installations were developed at Cam Ranh Bay, Saigon, and Vung Tau.

The growth of American power in South Vietnam had important political ramifications in Saigon. There was an apparent tendency on the part of U.S. leaders to make decisions, and announce them, without first consulting their Vietnamese allies. The American inclination to "steer the boat" was especially evident in discussions of war and peace aims, in which consideration of Vietnamese ideas was often conspicuously absent. Ruffled feelings among the Vietnamese developed into serious friction during 1965, and brought threats of renewed "fence-sitting" from many non-Communist Vietnamese nationalists in the south. Their cooperation was needed in building a strong base of support for a non-Communist nationalist government in Saigon. Only through the existence of such a broadly supported government could the United States obtain its main objective in ultimate peace negotiations—continued independence for South Vietnam.

The question of continuing the war versus negotiating a settlement with the Communists became involved in domestic American politics, and was clearly a divisive element in international affairs as well. Within the Western bloc, heavy pressures were put on Washington to negotiate an end to the conflict, on the ground that no other kind of settle-

UPI

SEARCH FOR HIDDEN WEAPONS is made by U.S. Marine among civilians in a pro-Vietcong village. When marines entered the village, they found only women and children.

ment was possible unless the United States was willing to go to war against Communist China, North Vietnam's chief ally. Public opinion in non-Communist countries reportedly was strongly opposed to a broadening of the war and skeptical of Washington's assertions that it wanted to terminate the war. Continued political instability in South Vietnam also was a factor in creating doubts as to the viability of the Saigon regime, as well as to its claim to represent the people.

On April 7, President Johnson, in a major address at Johns Hopkins University, pledged American assistance totaling $1 billion toward a $2 billion program for development of Southeast Asia. Widely hailed as a forward step, the pledge was implemented shortly thereafter by an $80 million congressional appropriation. Reaction in Western capitals and throughout non-Communist Asia was highly laudatory, but Communist response was negative.

OTHER VIETCONG SUSPECTS, a woman and a man, are ushered through a ruined village as U.S. Marines round up for search anyone who might be one of the "hidden enemy."

UPI

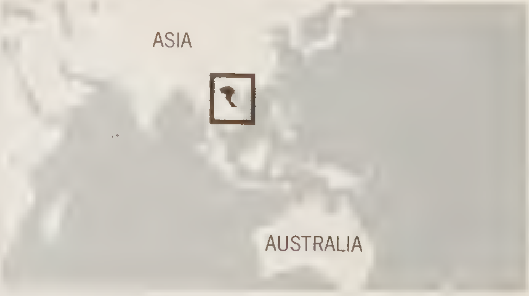
Initiatives toward finding a peaceful means of terminating the war were undertaken during 1965 by the Commonwealth of Nations; by 17 nonaligned chiefs of state, including Egypt's Nasser and Ghana's Nkrumah; by the Canadian government; and by the government of India. But Hanoi and Peking consistently refused these offers of "good offices" to bring about peaceful negotiations. In December, Foreign Minister Fanfani of Italy, serving as president of the UN General Assembly, brought to President Johnson's notice a potential peace initiative tendered via two Italian educators who had visited Hanoi. Premature newspaper disclosure of the conversations, however, aborted any possible results. Just before Christmas, in connection with a holiday cease-fire, President Johnson ordered a cessation to U.S. bombings of North Vietnamese targets (bombing was resumed on Jan. 31, 1966). At the end of the year he sent emissaries, including presidential adviser McGeorge Bundy, UN Ambassador Arthur Goldberg and Undersecretary of State W. Averell Harriman on a dramatic tour of world capitals to ask support in bringing the Communists to the negotiating table and to persuade world leaders of the U.S. government's sincerity. Initial results were disappointing, however. (See also FOREIGN POLICY, U.S.)

NORTH VIETNAM
(DEMOCRATIC REPUBLIC OF VIETNAM)

The war brought destruction to North Vietnam for the first time since hostilities began in 1959.

Air Attacks. On Feb. 7, 1965, at President Johnson's order, 49 U.S. carrier-based planes bombed a Communist military staging base at Dong Hoi. This initial raid on North Vietnam came in reprisal for a Vietcong ground attack on two U.S. military barracks at Pleiku, South Vietnam, earlier the same day. On February 8, 24 South Vietnamese aircraft made their first attack on the Communist north, bombing military targets in retaliation for Hanoi's support of the Vietcong rebels. U.S. and South Vietnamese planes then bombed and strafed railroads, highways,

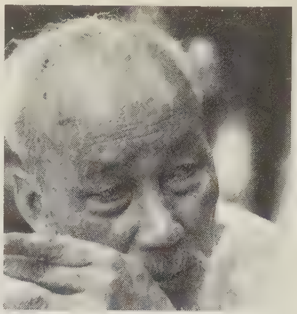
NORTH VIETNAM · Information Highlights



Area: 61,293 square miles.
Population: 17,900,000 (mid-year 1964 est.).
Chief Cities (1960 census): Hanoi, the capital, 414,620; Haiphong, 182,496.
Government: *President*—Ho Chi Minh; *Premier*—Pham Van Dong. *Parliament*—National Assembly (366 members).
Education: *Literacy rate* (1960)—65% of population aged 12 and over. *Total school enrollment* (1962–63)—2,335,500 (primary, 2,270,000; technical, 49,600; higher, 15,900).
Finance (1962): Budget balanced at $587,000,000; *monetary unit*, dong (2.94 dong equal U.S.$1).
Mineral Production (1963): $90,000,000.
Manufacturing (metric tons, 1964): Cement, 649,000.
Crops (metric tons): Rice (1962), 5,700,000; sweet potatoes (1961), 990,000; sugarcane (1962), 712,800; manioc (1961), 710,000; corn (1961), 290,000; cotton (1961), 6,200; tea (1960), 2,700.
Minerals (metric tons, 1964): Anthracite coal, 3,400,000 (ranks 11th among world producers); apatite, 996,000; salt, 150,000; phosphate rock, 50,000.
Transportation: *Railways* (1960), 485 miles; *airport*, Hanoi.

HO CHI MINH, president of North Vietnam, stepped up his efforts to unify all of Vietnam by force in 1965. With Soviet and Chinese material aid, he infiltrated increasing numbers of North Vietnamese troops into South Vietnam to aid the Vietcong guerrillas in their war against the Saigon government and its military allies. Rejecting U.S. efforts to negotiate a settlement of the conflict, he vowed to fight another 20 years or more to achieve victory.

Ho was born in 1890 in central Vietnam, then a part of French Indochina. He joined the Communist party in Paris when he was a young man, and in the 1930's he led guerrilla attacks against the French in Indochina. He resumed the struggle against the French after World War II, finally driving them from Vietnam in 1954. Then, as president of the Democratic Republic of Vietnam (the Communist north), he unleashed the Vietcong guerrilla war in 1958 in an effort to overthrow the non-Communist government of South Vietnam and to bring the entire country under Communist rule.



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bridges, and military staging centers in North Vietnam, although the large cities of Hanoi and Haiphong were spared. In the late fall, however, U.S. planes hit military objectives near both cities, including antiaircraft missile sites. By the year's end, Soviet-supplied SAM ground-to-air missiles and conventional antiaircraft guns had succeeded in downing more than 100 attacking planes.

Communist Regime. President Ho Chi Minh celebrated his 75th birthday in 1965, reportedly with undiminished vigor. The increasing strains of mounting military operations in South Vietnam slowed the already slackened pace of North Vietnam's economy, and civil defense measures prompted by the air attacks put further burdens on the population. The regime appeared to have moved closer to Peking in its international Communist alignment, and it continued to maintain forces in support of the Pathet Lao guerrillas in Laos. (See also ASIA.)

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VIRGIN ISLANDS

The economy of the Virgin Islands received a substantial boost in 1965 when Congress allowed visitors returning to the United States from the islands and other American territories a special $200 duty-free allowance on gifts bought in the territories. Americans returning from other areas of the world are permitted only a $100 exemption.

Tourism. Territorial Governor Ralph M. Paiewonsky testified in 1965 before congressional committees on the adverse effect to the islands' economy of a 1964 cut in customs exemptions. Congress later revised the law to exempt the Virgin Islands and other U.S. territories from the $100 duty-free limit. This revision, in effect, reinstated the previous $200 limit that had expired in 1964.

Many of the islands' tourist hotels expanded their facilities for the 1965–66 winter season. Hotel rooms available for guests in 1965 totaled 1,744, as against 1,323 guest rooms available in 1964. Six new hotels were being constructed and were expected to be completed in early 1966.

VIRGIN ISLANDS · Information Highlights

Area: 133 square miles (St. Croix, 82 sq. mi.; St. Thomas, 32 sq. mi.; St. John, 19 sq. mi.).
Population: 50,000 (1965 est.).
Capital: Charlotte Amalie, St. Thomas, 12,880 (1960).
Government: Governor, Ralph M. Paiewonsky. *Legislature*—Territorial Legislature (11 members).
Education (1965): Public school enrollment, 9,399; parochial and private school enrollment, 4,042; College of the Virgin Islands, 652.
Finance (fiscal year 1965): *Revenue*, $40,582,689; *expenditures*, $34,984,807, up 18% over fiscal 1964 (health, $5,304,707; education, $4,943,996; public works, $9,992,002).
Foreign Trade and Tourism (1964): *Exports*, $27,066,951; *imports*, $96,005,404; *tourist spending* (1964–65 fiscal year), $54,000,000 (from 495,712 tourists).

A program for training hotel employees, instituted in 1964, was continued in 1965. The program was financed in part under the Federal Manpower Development and Training Act, and includes classroom courses, as well as on-the-job training.

The Office of Public Relations and Information, established under the governor's office in 1963, was expanded in 1965. The staff was increased in number, and a new office was opened in St. Croix to supplement the St. Thomas operations. The office is responsible for publicizing and promoting tourism and economic development in the islands, and for providing local news media with information on actions of the governor's office.

Government. The territorial government used the bonding authority granted it by Congress in 1964 to issue $5 million in general obligation bonds in 1965. The bonds, sold at a highly favorable interest rate, were used to finance a $3 million "crash" program to build schools, to construct new health centers on St. Thomas and St. Croix, and to help finance a seawater desalinization plant, dedicated in November by Vice President Hubert Humphrey.

Constitutional Convention. A constitutional convention held in 1965 recommended that the Virgin Islands Constitution be amended to allow islanders to elect their own governor, now appointed by the president of the United States. Delegates also expressed the desire of islanders to vote for president and vice president of the U.S., and to have a nonvoting representative in the Congress.

RALPH M. PAIEWONSKY
Governor of the Virgin Islands

VIRGINIA

Developments in Virginia during 1965 produced major changes in the state's political complexion. In the November elections, Democratic Lt. Gov. Mills E. Godwin, Jr., won the governorship in a contest that produced a schism in the traditionally solid conservative ranks of the state's Democratic organization. Shortly after the election, Sen. Harry F. Byrd, Sr., longtime head of the so-called Democratic machine, resigned from the Senate, and the outgoing governor, Albertis S. Harrison, appointed Harry F. Byrd, Jr., to succeed his father as senator. Also during the year, court-ordered reapportionment of the state's congressional districts gave greater political influence to urban areas.

Elections. An unusual three-way contest developed in the gubernatorial race. Early in the year, Lieutenant Governor Godwin tactfully amassed enough support from both the conservative and liberal factions of the party to rule out the possibility of opposition in the Democratic primary. However, some conservative Democrats bucked party traces to form a Conservative party. They nominated William J. Story, Jr., an assistant school superintendent and a member of the John Birch Society, as their candidate. The Republicans held their convention in May and nominated a young Roanoke attorney, A. Linwood Holton, for the governorship.

Holton campaigned vigorously, labeling the Democratic state government as stagnant, machine-dominated, and unresponsive to vital state needs. Godwin charged the Republicans with lack of governmental experience, and staunchly defended the Democratic record of accomplishment for the state. Story called for a return to principles of constitutional government and liberty. Godwin won election on November 2, but received only 48% of the total vote. Holton won 38%—the usual percentage for a Republican gubernatorial candidate in Virginia—and Story garnered 13%.

The voters also chose a new General Assembly in the November elections. The Republicans increased their numbers from 11 to 12 in the 100-member House of Delegates, and retained 3 seats in the 40-member State Senate. (A later special election increased their Senate seats to 4.) All told, 37 of the 140 elected representatives were freshmen—a result, in part, of legislative reapportionment.

VIRGINIA · Information Highlights

Area: 40,815 square miles.
Population: 4,400,000 (1965 est.).
Chief Cities (1965 est.): Richmond, the capital (223,000); Norfolk (322,000); Arlington (173,000); Newport News (130,000); Virginia Beach (123,000); Portsmouth (118,000); Alexandria (115,000); Hampton (110,000).
Government: *Chief Officers*—governor, Mills E. Godwin, Jr. (Democrat); lt. gov., Fred G. Pollard (D); secy. of state, Martha B. Conway; atty. gen., Robert Y. Button (D); treas., Lewis H. Vaden; supt. of pub. instr., Woodrow W. Wilkerson; chief justice, John W. Eggleston. *Legislature*—General Assembly of Virginia (convened Jan. 12, 1966); Senate, 40 members (36 Democrats, 4 Republicans); House of Delegates, 100 members (88 D, 12 R).
Education: *School enrollment* (1964–65)—public elementary, 670,000 pupils (22,500 teachers); public secondary, 330,000 pupils (15,850 teachers); nonpublic schools, 64,100 pupils (2,460 teachers); college and university (fall 1964), 81,794 students. *Public school expenditures* (1964–65)—$341,000,000 ($380 per pupil); average teacher's salary, $5,450.
Public Finance (fiscal year 1965): *Revenues*, $1,005,272,515 (motor fuel tax, $111,151,285; federal funds, $228,382,561). *Expenditures*, $949,903,200 (education, $293,748,895; health, welfare, and safety, $106,338,429; roads and highways, $310,671,980). *State debt*, $1,388,961 (June 30, 1965).
Personal Income (1964): $9,804,000,000; average annual income per person, $2,239.
Public Assistance (fiscal year 1965): $32,113,800 to 71,066 recipients (aged, $10,197,900; dependent children, $13,479,800).
Labor Force (employed persons, July 1965): *Agricultural*, 129,400; *nonagricultural* (wage and salary earners), 1,201,800 (26.4% manufacturing, 20.5% trade, 18.2% government). *Unemployed persons* (July 1965)—44,700.
Manufacturing (1963): Value added by manufacture, $3,064,019,000 (primary metals, $62,042,000; nonelectrical machinery, $58,679,000; electrical machinery, $180,815,000; fabricated metals, $101,745,000; food and products, $323,697,000).
Agriculture (1964): *Cash farm income*, $514,399,000 (livestock, $249,906,000; crops, $249,667,000; govt. payments, $14,826,000). *Chief crops* (tons)—corn for grain, 789,000 (ranks 19th among the states); apples, 235,000 (rank, 6th); potatoes, 139,000 (rank, 15th); barley, 123,000 (rank, 15th); peanuts, 109,000 (rank, 5th); sweet potatoes, 108,000 (rank, 3rd); tobacco, 84,000 (rank, 3rd).
Mining (1964): *Production value*, $237,415,000. *Chief minerals* (tons)—coal, 31,654,000 (ranks 6th among the states); lime, 780,000 (rank, 6th); zinc, 21,004 (rank, 13th); lead, 3,857 (rank, 8th); stone, 30,407,000; sand and gravel, 10,588,000.
Fisheries (1964): *Commercial catch*, 465,768,000 pounds ($24,219,000). *Leading species*—menhaden, 330,708,000 pounds ($4,798,000); hard blue crabs, 51,572,000 pounds ($3,385,000); alewives, 26,640,000 pounds ($490,000); private fall oysters, 5,649,000 pounds ($4,121,000).
Transportation: *Roads* (1963), 57,436 miles (56,398 surfaced); *motor vehicles* (1964), 1,708,000; *railroads* (1963), 4,084 miles; *aircraft* (1964), 1,662 (110 airports).
Communications: *Telephones* (1965), 1,671,700; *television stations* (1964), 11; *radio stations* (1964), 144; *newspapers* (Jan. 1, 1965), 32 (daily circulation, Sept. 30, 1964, 966,914).

Reapportionment. In 1965, Virginia faced another reapportionment order, this one from the Virginia Supreme Court. On January 18 the court ruled that the Virginia Constitution required congressional districts to be nearly equal in population. Consequently, the General Assembly met in special session on August 31, and redistricted the state to include portions of the populous Washington and Norfolk suburbs in two predominantly rural districts.

The Byrds. The most startling political news of the year came soon after the November elections. On November 11, Sen. Harry F. Byrd, Sr., resigned his seat in the U.S. Senate after serving 32 years. One day later, Governor Harrison appointed State Sen. Harry F. Byrd, Jr., to replace his father.

The elder Byrd's resignation, coupled with the Conservative defection from the Democratic party in the gubernatorial race and Godwin's apparent swing to the political center, prompted some analysts to conclude that the Byrd machine was either dead, dying, or in a process of transformation. Others detected more continuity in the changes, noting Godwin's close affiliation with important conservatives in the organization and the literal descent of power from Byrd, Sr., to Byrd, Jr. As the son closely resembled the father both in personal appearance and political ideology, the change in political leadership may be merely a matter of new wine in old bottles.

The real impact of the 1965 political developments seemed likely not to be apparent until 1966, when both Byrd, Jr., and veteran Sen. A. Willis Robertson, a conservative who announced his bid for reelection to the Senate the same day the elder Byrd resigned, probably will face stiff liberal opposition in the Democratic primary.

WILLIAM LARSEN
Associate Professor of History
Radford College

VITAL STATISTICS. See DEATH RATES; MARRIAGE AND DIVORCE; POPULATION TRENDS.

WAGES AND HOURS. See LABOR.

WALLACE, George. See biographical sketch under ALABAMA.

WALLACE, Henry Agard

Former secretary of agriculture and vice president of the United States: b. Adair County, Iowa, Oct. 7, 1888; d. Danbury, Conn., Nov. 18, 1965.

Henry A. Wallace was one of the most controversial public men of this century. He disdained the ways of a politician, yet he narrowly missed becoming president of the United States. He had a deep religious faith and felt compassion for the common man, yet he found much to approve in atheistic communism during one of its most brutal periods. He had a keen scientific mind, yet many persons thought that he was a mystic. The texts of his speeches and of his books reveal a prose of soaring eloquence, yet the harsh, flat delivery of his speeches often left his audiences unmoved.

Early Career. Wallace's grandfather founded *The Iowa Homestead* and *Wallaces' Farmer*, publications that became influential in the Midwest. His father was secretary of agriculture from 1921 to 1924. Wallace accepted, for a time, the Republicanism and Presbyterianism of his forebears.

As a boy of 15, Wallace conducted experiments with corn that discredited the findings of an expert. In 1910 he completed his agricultural studies at Iowa State College. Wallace forecast the 1920 agricultural collapse after studying a corn-hog ratio chart that he had developed. By 1921, when he succeeded his father as editor of *Wallaces' Farmer*, he had developed a successful hybrid corn.

During the 1920's both Wallace and his father tried in vain to persuade Republican administrations to support measures to lift the incomes of farmers. After his father's death, Wallace looked to the Democratic party, and helped prepare the farm platform for Franklin D. Roosevelt during the latter's presidential campaign in 1932. After his election, Roosevelt appointed Wallace secretary of agriculture.

Secretary of Agriculture. The United States was gripped by a general depression in 1933 and farmers were desperate. Wallace won passage of the Agricultural Adjustment Act, which provided for the destruction of excess crops and pig litters. This expedient, though harsh, was effective, and farm income rose. Wallace originated a food stamp plan that permitted needy persons to obtain surplus government food, and he fought for soil conservation measures. Recalling the Biblical story of Joseph, Wallace introduced the "ever normal granary," and stored surplus food against the day when shortages might occur. His foresight was vindicated when war brought an increased demand for food.

Roosevelt sought a third term in 1940, and he wanted Wallace to be his vice presidential running mate. Roosevelt admired Wallace's intellectualism, his loyalty to the New Deal, and the vigorous way in which he had denounced the growing menace of Nazi Germany. However, many politicians regarded Wallace as an ultraliberal visionary. He seldom moved in political circles. He preferred to spend free time studying various religious and philosophical systems (he eventually turned to the Episcopal Church) and to propagating, in speeches and books, his ideas on a great variety of subjects. Roosevelt forced through Wallace's nomination for vice president, and they were elected.

Vice President. During World War II, Wallace articulated the ideals that he thought should guide the United States during both the conflict at hand and the peace that would follow. He spoke all over the country, telling the people that they must make great sacrifices. He believed that an Allied victory could lead to widespread social reform. "The object of this war," he said, half seriously, "is to make sure that everybody in the world has the privilege of drinking a quart of milk a day." And he asserted that "the century which will come out of this war—can be and must be the century of the common man."

The vice president spoke with admiration of the Soviet Union. Increasingly, he referred to "Fascists" within the ranks of American businessmen.

Wallace, unlike vice presidents before him, was active in the executive branch of the government. Roosevelt named him chairman of the Economic Defense Board (later the Board of Economic Warfare, or BEW). Wallace and his associates started to snap up strategic materials from foreign countries, and cost was no object. Secretary of Commerce Jesse Jones also had the task of procuring needed materials, and he was aghast at Wallace's freewheeling tactics. After an acrimonious public row between the two men, Roosevelt rebuked both, dissolved the BEW, and ended Wallace's role in economic warfare.

WERNER WOLFF, FROM BLACK STAR

HENRY WALLACE, former vice president, spent his last years on his South Salem, N.Y., farm. He died November 18.

In July 1944, Roosevelt announced his candidacy for a fourth term, but did not insist that Wallace go on the ticket again. Although Wallace had wide support among labor and liberal groups, a coterie of big city "bosses" swung the vice presidential nomination to Senator Harry S Truman of Missouri.

Later Career. Roosevelt had acceded reluctantly to the displacement of Wallace, whom he now appointed secretary of commerce. In April 1945, Roosevelt died, and was succeeded by Truman. Wallace soon began to criticize the new administration's "tough" policy toward the Soviet Union. Secretary of State James F. Byrnes complained to Truman, who ousted Wallace from the cabinet.

Wallace, who still wanted the United States to reach an accommodation with the USSR, accepted the Progressive party's presidential nomination in 1948. That party was heavily infiltrated by Communists, and Wallace exhibited great naïveté in espousing their views. He polled about one million votes, or 2.4% of the total cast. Later, he broke with the Progressive party.

Wallace retired to his farm in South Salem, N.Y. He conducted experiments aimed at increasing the yield or improving the quality of farm products. After a short illness, he succumbed to lateral sclerosis. He was survived by his widow and three children.

Donald Young
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Author, "American Roulette: the History and Dilemma of the Vice Presidency"

WASHINGTON

On the morning of April 29, 1965, much of the Washington Puget Sound region reeled under its second strongest earthquake in recorded history. Reaching an intensity of about 7 on the Richter Scale, and exceeded only by the April 13, 1949 temblor, the massive, three-wave quake caused eight deaths and property damage initially estimated at $15 million. After closer inspection during the following months, many companies and public agencies discovered quake-associated damages which necessitated the abandonment and demolition of buildings, thus substantially increasing the estimated losses. Most of the damage occurred in Seattle, although Tacoma and Olympia suffered substantial losses.

Reapportionment Impasse. The 39th Washington Legislature reached an impasse on Jan. 12, 1965, the day after its regular session convened, when it could not reach agreement on legislative reapportionment. Earlier, a federal district court, ruling that the Legislature was not apportioned in compliance with the 14th Amendment to the U.S. Constitution, had enjoined the Legislature from passing any other measure until it enacted an apportionment law which complied with the U.S. Supreme Court's "one-man, one-vote" decision in 1964.

Redistricting Bills. The Democratic-controlled Legislature attempted to pass an apportionment measure and have it signed into law during the first two days of the 39th session, while Democratic Gov. Albert D. Rosellini was still in office. A Senate bill failed narrowly to muster enough support in the House, and the matter carried over into the new administration of Republican Gov. Daniel J. Evans, who took office on January 13. The first redistricting measure to reach the new governor's desk was vetoed. Finally, after 47 days of the 60-day regular session, an acceptable bill was signed by Governor Evans. Shortly thereafter, the federal court declared the redistricting measure constitutional. By this time, however, tempers in the Legislature were short, and political disagreement adversely affected consideration of many other bills, which had to be disposed of in a special session.

During the special session another redistricting bill, this one for congressional districts, was offered. The governor vetoed the bill, since, in his opinion, it failed to redistrict on an equitable bipartisan basis. An amendment then was passed which would place the measure before the voters in the general election of November 1966.

Taxation. The Legislature acted to raise nearly all of the estimated additional requirement of $55 million by increases in retail sales and use taxes and by new taxes on liquor, beer, and tobacco products.

Economy. Washington's economy suffered a momentary setback when the Boeing Company, the region's largest industrial employer, was not awarded the contract to build the Air Force C-5A heavy logistics transport plane. The disappointment was short lived, however, and was tempered by continued high employment in the state and by a large backlog of orders at the Boeing plant.

An agreement finally was reached between Seattle and Century 21 Center, Inc., which managed facilities remaining after Seattle's 1962 World's Fair, to transfer full ownership and management of these facilities to the city. The agreement ended a long squabble over the operation of the facilities.

WARREN W. ETCHESON
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University of Washington

WASHINGTON · Information Highlights

Area: 68,192 square miles.
Population: 3,051,000 (1965 est.).
Chief Cities (1965 est.): Olympia, the capital, (18,900); Seattle (565,000); Spokane (184,000); Tacoma (152,000); Everett (50,500); Yakima (44,200); Bellingham (35,200); Vancouver (35,200).
Government: *Chief Officers*—governor, Daniel J. Evans (Republican); lt. gov., John A. Cherberg (Democrat); secy. of state, A. Ludlow Kramer (R); atty. gen., John J. O'Connell (D); treas., Robert S. O'Brien (D); supt. of pub. instr., Louis Bruno; chief justice, Hugh J. Rosellini. *Legislature*—(convened Jan. 11, 1965); Senate, 49 members (32 Democrats, 17 Republicans); House of Representatives, 99 members (60 D, 39 R).
Education: *School enrollment* (1964–65)—public elementary, 408,000 pupils (15,110 teachers); public secondary, 311,000 pupils (12,815 teachers); nonpublic schools, 66,200 pupils (2,320 teachers); college and university (fall 1964), 96,871 students. *Public school expenditures* (1964–65)—$365,000,000 ($534 per pupil); average teacher's salary, $6,580.
Public Finance (fiscal year 1965): *Revenues*, $1,136,298,963 (4% sales tax, $246,911,808; motor fuel tax, $83,452,004; federal funds, $227,644,536). *Expenditures*, $874,232,151 (education, $346,388,271; health, welfare, and safety, $202,221,991; roads and highways, $154,577,222). *State debt*, $386,211,000 (June 30, 1965).
Personal Income (1964): $7,861,000,000; average annual income per person, $2,635.
Public Assistance (fiscal year 1965): $125,382,726 to 136,224 recipients (aged, $33,882,604; dependent children, $35,066,808).
Labor Force (employed persons, August 1965): *Agricultural*, 90,600; *nonagricultural* (wage and salary earners), 898,100 (25.7% manufacturing, 21.9% trade, 20.5% government). *Unemployed persons* (August 1965)—50,400.
Manufacturing (1963): Value added by manufacture, $2,872,770,000 (transportation equipment, $898,828,000; primary metals, $202,461,000; nonelectrical machinery, $73,093,000; electrical machinery, $29,819,000; fabricated metals, $77,288,000; food and products, $363,218,000).
Agriculture (1964): *Cash farm income*, $642,750,000 (livestock, $215,306,000; crops, $394,654,000; govt. payments, $32,790,000). *Chief crops* (tons)—wheat, 2,466,000 (ranks 5th among the states); sugar beets, 1,333,000 (rank, 6th); alfalfa, 1,280,000 (rank, 19th); apples, 624,000 (rank, 1st); potatoes, 605,000 (rank, 5th); barley, 538,000 (rank, 5th); rye, 48,000 (rank, 5th).
Mining (1964): *Production value*, $80,977,000 (ranks 34th among the states). *Chief minerals* (tons)—uranium ore, 147,005 (rank, 5th); peat, 35,609 (rank, 4th); zinc, 24,296 (rank, 12th); lead, 5,731 (rank, 6th); copper, 35 (rank, 13th); sand and gravel, 31,920,000.
Fisheries (1964): *Commercial catch*, 101,150,088 pounds ($15,599,923). *Leading species*—bottomfish, 38,579,423 pounds ($2,550,847); salmon, 21,277,391 pounds ($6,488,757); halibut, 12,092,428 pounds ($3,031,211); oysters, 8,273,422 pounds ($1,607,893).
Transportation: *Roads* (1965), 68,900 miles (32,520 surfaced); *motor vehicles* (1965), 1,633,499; *railroads* (1964), 5,945 miles; *airports* (1964), 215.
Communications (1965): *Telephones*, 1,423,300; *television stations*, 13; *radio stations*, 133; *newspapers* (Jan. 1, 1965), 24 (1964 daily circulation, 961,930).

SEATTLE suffered eight deaths and wide property damage from earthquake which hit Puget Sound region on April 29.

WIDE WORLD

WASHINGTON (DISTRICT OF COLUMBIA)

Home rule proved to be the central issue for residents of Washington, D.C. in 1965. The home rule question brought into focus the city's complex and sometimes conflicting roles as the nation's capital, the center of a rapidly growing metropolitan area, a municipality, and the United States' largest city with a predominantly Negro population.

Home Rule. On September 29 the House of Representatives killed a Senate-approved bill that would have allowed residents of the District of Columbia to elect their own mayor and city council. The House instead passed a substitute bill to put the home rule issue before district voters in a referendum.

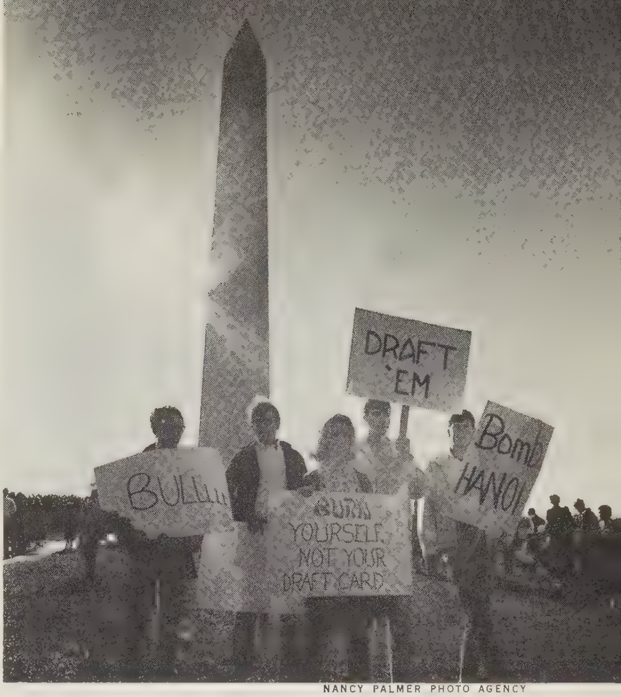
Two proposals emerged as major alternatives in congressional debate on the home rule question. The "Bible bill," introduced by Sen. Alan Bible (D, Nevada) and backed by President Lyndon Johnson, proposed an elected mayor, city council, and school board. After the bill was passed by the Senate but voted down by the House, the latter body approved a bill introduced by Rep. B.F. Sisk (D, California). This proposal called for a referendum by which voters would approve or disapprove the creation of a charter board to draft a plan for local government. The voters would also choose 15 board members from a list of nonpartisan candidates nominated by petition. If the creation of the charter board is approved, the board will submit its plan for local government to a second referendum. If the plan is approved, it will go to Congress, which may either veto or approve the plan, but cannot modify it. The "Sisk bill" could bring home rule to Washington within 15 months after its enactment.

Crime. Figures released in July revealed that the crime rate in the district had risen for 37 consecutive months. As part of an emergency effort to combat crime in the city, Congress approved pay increments and a generally intensified work schedule for district police. Police powers and procedures also received attention. In August, following congressional hearings, and on the recommendation of the Justice Department, the district police chief, John B. Layton, issued an executive order defining the length of time and conditions under which persons arrested on probable suspicion could be held for questioning.

Housing and Redevelopment. The city received long-sought congressional approval to use existing government redevelopment machinery in commercial areas. It also got a grant of $1 million to develop plans for an extensive downtown urban renewal project. In addition, Congress authorized city enforcement of housing regulations. Refusal to make ordered repairs may result in city-conducted repair operations, to be paid by landlords. The city may charge interest on unpaid repair bills and, if costs are not paid within two years, it may sell the city-repaired properties.

Plans were made to establish an 11th code conservation area—a neighborhood designated for intensive inspection and enforcement of city housing codes. An intensified program of investigation and legal action against alleged violations of fair housing practices was also planned.

Public Construction. Congress approved $75 million for a third building for the Library of Congress, to be named for President James Madison. It also appropriated $100,000 to continue work on the Franklin D. Roosevelt Memorial.


DRAFT 'EM
Bomb HANOI
BULL
BURN YOURSELF NOT YOUR DRAFT CARD

NANCY PALMER PHOTO AGENCY

PICKETS EXPRESS APPROVAL of U.S. policy in Vietnam as marchers (background) converge on the nation's capital on November 27 to protest U.S. involvement in the war.

Transit. In 1965, Congress approved a $431 million subway and surface rail transit system for the Washington area, appropriating about $6 million to get the project under way. The system, scheduled for completion in 1972, will include single-rail extensions into nearby Maryland and Virginia.

Education. Washington's educational system, particularly the use of the "track system," which separates students into four different programs according to their ability, was challenged as being racially discriminatory. Congressional hearings and an investigation by local officials raised serious questions as to the quality of education available to children in the district's public schools, approximately 90% of whom are Negro.

Metropolitan Planning. In September the Washington Council of Governments received a federal grant to study metropolitan area government problems. The council began evaluating a study recommending the merger of related agencies in the Washington area and the establishment of some form of metropolitan government.

Government. The city continued to be governed in 1965 by Congress and administered by three commissioners appointed by the president. Two of the commissioners, Walter N. Tobriner, the commission president, and John B. Duncan, are civilians; the third, Brig. Gen. Charles M. Duke, is an officer of the U.S. Corps of Engineers.

Economy. Congress approved district government expenditures of $360,228,500 for the fiscal year 1966. Assessed valuation of taxable property in the city was $2,705,307,317 in June 1965. The tax rate was $2.50 per $100 assessed valuation.

Unemployment in the district proper was estimated in November at 4% of a work force of 410,250. At the same time, metropolitan area unemployment was estimated at only 2%.

Jean E. Spencer
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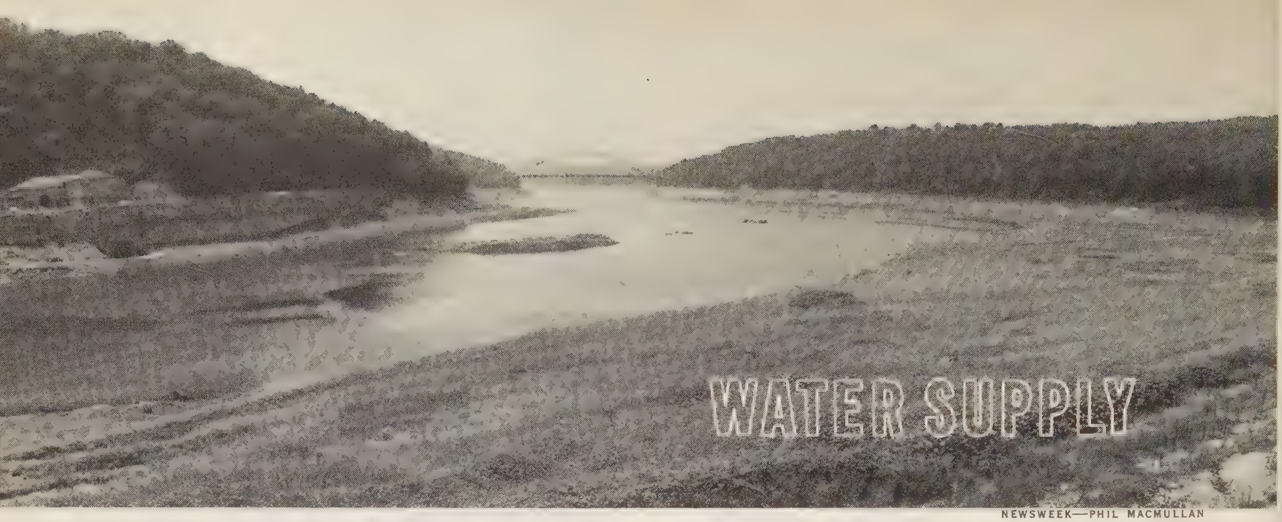


NEWSWEEK—PHIL MACMULLAN

THE CRITICAL WATER SHORTAGE in the northeastern United States is evidenced by the nearly empty Croton Reservoir of the New York City water system.

WATER SUPPLY

The four-year drought that has afflicted the northeastern section of the United States in recent years dramatizes the dependence of industry, agriculture, and population on vast quantities of fresh water. Many parts of the world are faced with similar problems. In some Middle Eastern countries, such as Israel, Iran, Jordan, Lebanon, and Syria, the fight for water has led to intense international negotiation. In Asia, India and Pakistan dispute over division of the Indus River waters. All along the southern coast of the Mediterranean there is an insatiable demand for water, but only limited quantities of water are available except from the sea itself. Australia also has many water problems, as do South America and Africa.

There is no shortage of water; rather, the earth's water is poorly distributed. If civilizations continue to develop in water-short areas, water must be transported over long distances at great cost, as in southern California, or it must be obtained from saline sources. The United Nations, in an extensive 1964 report on "Water Desalination in Developing Countries," pointed out the relationship between economic growth and water, and observed that many areas will have to rely on desalinated water if development is to continue.

Of paramount importance is the problem of future water supplies for urban areas. It has been estimated that more than half of the world's population will be living in cities of 100,000 or more by the year 1990. Already such a situation exists in the United States, where in 1960 about 150 million people, or 80% of the population, lived in 22,000 communities. These communities were served by almost 20,000 water supply organizations, which furnished more than 20 billion gallons per day.

PROBLEMS OF WATER SUPPLY

There are two fundamental problems connected with water supply. The first is water shortage, especially as a result of drought. The second is the rising cost of supplying sufficient water for increasing needs.

Water Shortage. The water shortage in the Northeastern states typifies a basic problem that communities face. The water-supply systems in these states were designed on the basis of statistical averages of rainfall over long periods, and records indicated that only two very dry years might occur in succession. On this basis, Boston, New York City, Jersey City, Newark, and many smaller cities built large reservoir systems to collect and store flood waters during the spring runoffs. However, in the 1960's a drought of four years' duration struck the area—a drought unprecedented in the recorded data used by engineers to predict stream flows.

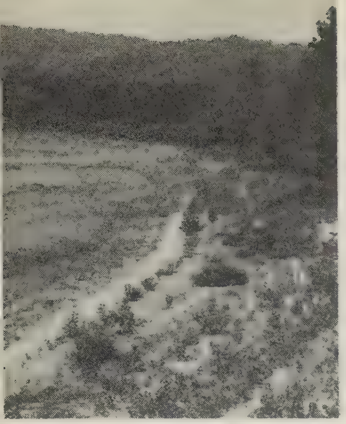
The drought will compel more cities to construct larger reservoirs to take into account probable future extended dry periods. In this connection, New York City, preparing for water use beyond the year 2000, has constructed a new reservoir on the West Branch of the Delaware River. However, the reservoir was not completed in time to capture any of the spring flood runoff during 1964. If the reservoir had been nearly full by the spring of 1965, it would have relieved the city's water shortage considerably. The completed reservoir should provide more water for the city from winter rains and snows in 1966, but to be on the safe side if the drought continues, the city made provisions to pump 100 million gallons per day of inferior water from the Hudson River.

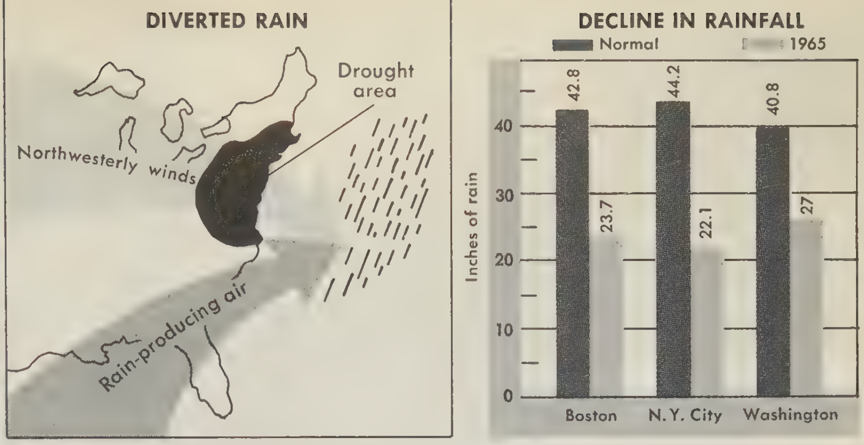
Boston's case was different. The Metropolitan District Commission had a large reservoir with several years' supply, but the transmission and distribution systems from the reservoir were not large enough to satisfy the growing demand for water by cities and towns in the metropolitan area.

From the experiences of New York City and Boston, two conclusions may be drawn. First, cities must provide enough storage to supply water in times of drought. Second, they must enlarge their distribution systems in order to satisfy any demands that customers may place upon them.

Costs. The theory of water marketing espoused by the American Water Works Association holds that a consumer is entitled to all the water he wants and needs, but that he should pay his fair share of the costs. Water is the cheapest commodity on earth, and people can afford to pay more for it—and will, as communities go farther afield for their supplies. (Water distributed in New York City costs the consumer only 5 cents a ton, or 20 cents per 1,000 gallons; elsewhere, expensive water may run as high as 25 cents a ton, or $1 per 1,000 gallons.)

What is water worth? One of the many ways of pricing the value of water is to estimate the expected dollar return per acre-foot. (An acre-foot—





SEVERE DROUGHT IN THE NORTHEAST is attributed to a change in its weather pattern. Southwesterly winds, laden with moist air, formerly penetrated to the Northeastern United States and delivered rain. But in recent years the northwesterly winds have moved farther south than usual and pushed the needed rain out into the Atlantic Ocean. As a consequence, reservoirs in some areas have dropped to record lows despite conservation drives.

one foot of water covering an acre of ground—equals 333,000 gallons). Nathaniel Wollman of the University of New Mexico has calculated that an acre-foot of water used for irrigation in the West will return $45 to $50 in agricultural products, whereas the same amount of water used for industrial purposes will bring a return of from $3,000 to $4,000. Another way of looking at the value of water is to consider its role in making a region habitable and thus producing income. For example, few people would live in Arizona if there were no water. But in 1960, water developments in the state yielded 7 billion acre-feet of water, and the state's residents received personal income of $3.5 billion for the year. Thus, in terms of personal income, each acre-foot of water returned $500.

Actual water costs in the United States run from $20 to $300 per acre-foot. Water charges, on the other hand, run from $5 to $100 per acre-foot. Hydroelectric power developments in connection with water resource projects help pay for water. This is particularly true on such gigantic projects as Hoover Dam and other Colorado River developments that utilize the water to generate power before it is taken out of the river to supply cities and farms in Arizona, Nevada, and California.

SOURCES AND USE OF WATER SUPPLY

Hydrology is the science dealing with rainfall, water runoff, evaporation, and groundwater sources. Total rainfall is plentiful on earth, averaging 280 trillion gallons per day—enough to supply 280,000 cities the size of New York. However, rain does not always fall in the places where it is needed or at a uniform rate. Unfortunately, only 25% of the rain falls on land surfaces, and about 70% of this amount is lost by evaporation. The remainder runs off the land in streams and seeps into the groundwater reservoirs.

People often choose to live in areas of scarcity and drought, rather than in places rich in water resources. Some great rivers, such as the Amazon and Orinoco in South America, the Yukon and Mackenzie in North America, and the Mekong in Southeast Asia, are virtually untapped resources, with great quantities of flood water spilling to the sea. But the waters of other rivers such as the Ohio, Rhine, Danube, Indus, Tigris, and Jordan, are used over and over again, and periods of scarcity frequently occur.

Hydrological Studies. The United Nations is sponsoring the International Hydrological Decade (1965–74) so that engineers and scientists from 70 countries may pool their research facilities, skills, and experience in learning more about the climatic and rainfall conditions of all parts of the world. Some of the goals will be to predict stream runoff, groundwater levels and yields, and stream capacities to receive waste waters and purify themselves. These predictions will serve to guide the development of future water supplies.

The U.S. Geological Survey has conducted extensive studies over many years on the sources, available quantities, and expected quality of water supplies in the United States. Quantity and quality are equally important, since man requires very close tolerances on the quality of the water he can use. If the salt content is higher than 0.1% (1,000 parts per million), the water is brackish and tastes bad. (The U.S. Public Health Service suggests that half this amount should be the maximum in most public water supplies.) The quality requirement obviously limits the use of the world's available water.

According to data compiled by the U.S. Geological Survey, 74.5% of the earth's surface is water or ice. The oceans hold over 97% of the earth's water, but the quality of ocean water is too poor for human consumption because it has an average total dissolved-solids content of 3.5%—70 times the maximum allowable concentration. The icecaps of the Arctic and Antarctica hold 2.2% of the earth's water—an amount that represents nearly all the earth's fresh-water supply. Surface waters on land areas constitute only 0.017% of the earth's water, and half of this is saline.

Groundwater, constituting 0.61% of the earth's water, is the greatest potential source of fresh water. Half of it is available at a depth up to half a mile below the surface. In some areas, such as Arizona, Illinois, Israel, Greece, and Australia, groundwater is pumped at a faster rate than it is replenished. This depletion can lead to shortages, and other sources of supply must be found.

Use and Consumption. Water consumption in the United States amounted to 61 billion gallons per day in 1960. This is not to be confused with water use, which amounted to 270 billion gallons per day. Use exceeds consumption because industry, particularly the power industry, returns a great

UPI PHOTOS

WATER SUPPLY problems beset many lands in 1965. East Africans *(left)* and Peruvians *(center)* carried water long distances; Indians *(right)* built new systems.

deal of water to the rivers virtually unchanged (except for an increase in temperature.) Of the water withdrawn from rivers and the ground, 40% is used by power plants, 50% by agriculture for irrigation, 8% for municipal water supplies, and 1% for rural water supplies.

Water that is consumed does not reappear. Much of it evaporates into the atmosphere or goes into products of industry and agriculture. Of the 61 billion gallons of water consumed per day in 1960, 5% went for industrial purposes, 85% for irrigation, 6% for public water supplies, and 4% for rural uses.

From the standpoint of water use, the highest priority goes to public water supplies, although these constitute only a small fraction of the total. The estimated U.S. public water supply use rate of 270 billion gallons a day in 1960 may increase to about 900 billion gallons a day by the year 2000, according to a report (1960) by the U.S. Senate Select Committee on National Water Resources. New York City consumed a little over one billion gallons per day in 1965, but may require twice that amount by the year 2000.

INCREASING THE WATER SUPPLY

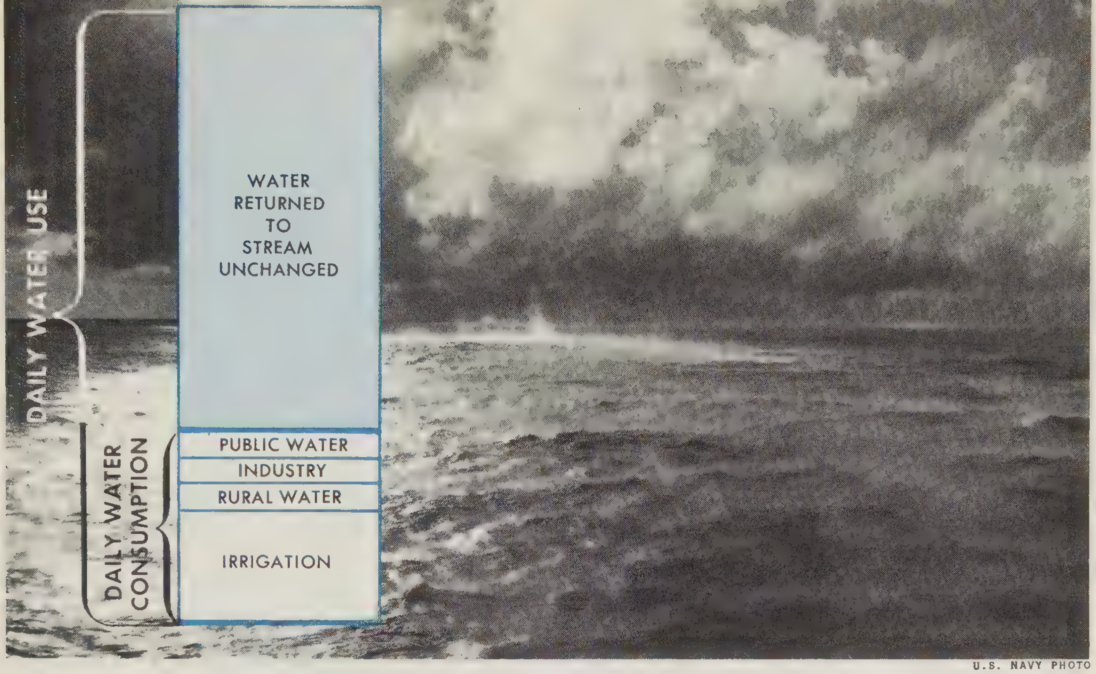
To increase their water supplies, cities will have to go farther afield to tap untamed rivers. For instance, California is spending more than $2 billion to bring water from the north coastal area of the state, where 80% of the rainfall occurs, to the heavily populated south, where 80% of the people and industries are situated.

California Project. In the California water project, large dams and tunnels in the north will collect and convey water to the Sacramento River. From there the water will flow to the river's delta, and then be pumped into canals and reservoirs to flow more than 400 miles south through the California Aqueduct to the Los Angeles-San Diego metropolitan complex. This water will cost from $75 per acre-foot near San Francisco to $85 far to the south in San Diego. The state water project will yield over 4 million acre-feet yearly, equivalent to an average of 4 billion gallons daily. The distance between the northernmost dams and the southernmost point of use will exceed 700 miles.

The question might well be raised as to why southern Californians do not move north to the source of water supply. The answer is that the climate is less desirable in the north, and the region's mountainous terrain does not lend itself to development of industrial and residential urban centers. People choose to live in the better climate, and expect engineers to deliver the water they need for survival. They are willing to pay for water, and political, legal, and administrative organizations (such as the California Department of Water Resources and the Metropolitan Water District of Southern California) are created to satisfy their demands.

Needs in the East. The cities in the Boston-to-Washington megalopolis will have to institute similar engineering projects. Perhaps they will have to tap the St. Lawrence or the headwaters of other ununtamed rivers, such as the Susquehanna, the Delaware, and the Hudson, by building great dams or collection works. Those who prefer to see great quantities of water flowing to the sea in trout streams will have to bow to the welfare of the people as a whole and support the construction of reservoirs for high-priority drinking water. But fishing, boating, and other recreational demands will be satisfied by the new reservoirs, as in California, where recreational areas have been opened at large reservoirs.

Reclaiming Used Water. To make river water fit for use and reuse, tremendous quantities of waste waters must be treated to a standard acceptable for discharge into rivers. For instance, New York City proposes to pump Hudson River water from a location near Poughkeepsie, N.Y., even though the upper New York State communities north and west of Albany discharge sewage into branches of the Hudson. Gov. Nelson Rockefeller recognized that these waste waters must be treated, and in 1965 received approval from New York State voters for a $1 billion bond issue to assist communities in removing wastes from rivers. With the aid of a broad public relations cam-



U.S. NAVY PHOTO

MUCH WATER IS USED but little is consumed. Electric power plants, for instance, use great quantities to condense steam, but return the water to streams.

paign in which many civic organizations and conservation groups took part, public opinion ran 5 to 1 in favor of the governor's pure water program.

The release of stored waters behind large dams can dilute the wastes to provide sufficient oxygen in the streams to support fish life and keep the esthetic environment at the level required for recreation. The Senate Select Committee on National Water Resources estimated that sewage treatment plants and reservoirs to provide dilution waters would require about $100 billion in construction costs between 1960 and 2000. The program would provide for collecting and treating all sewage, and reclaiming sewage for reuse in rivers and for recharging groundwaters.

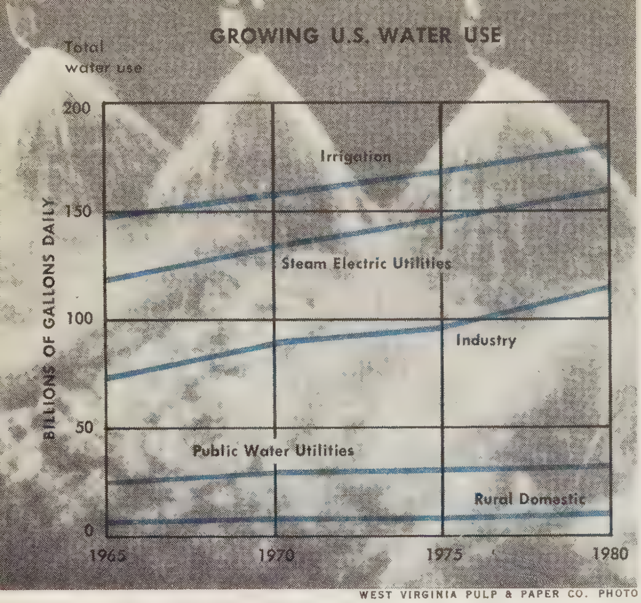
The philosophy of reclamation is based on the fact that sewage is once-used water, and that because sewage is 99.9% pure water, the contamination is relatively small. Contaminants can be taken out by physical, chemical, and biological processes that scientists and engineers have developed to a high degree of efficiency. At the present time, this water is thrown into the sea in Boston, New York, Philadelphia, San Francisco, Los Angeles, and Houston. But it can be collected, treated in waste-water reclamation plants, and reused even as pure drinking water. This is now being done on a large scale in Los Angeles County, and is being contemplated in Orange County, Calif., and Nassau County, N.Y., by replenishing groundwater resources with reusable waste waters.

Thus, the future of water supplies lies not only in the capture of flood waters, but also in the treatment and reuse of waste waters through scientific reclamation plants. (See also POLLUTION.)

Converting Saline Water. Desalination offers an opportunity to reclaim the brackish waters underlying vast parts of the midcontinent of the United States and many other areas of the world. Brackish water contains dissolved mineral solids that range from 1,000 to 10,000 parts per million—that is, up to 1% of the weight of the water. These minerals, dissolved from the rocks in the ground, add to the hardness of the water and affect its taste adversely. Many small towns cannot go far for water supplies because of the appreciable per capita cost of small

WIDE WORLD

SOUTH AFRICA suffered so prolonged a drought in 1965 that the River Groot Marico dried up. Sheep are shown foraging for blades of grass in the river bed, 150 miles from Johannesburg, and near the Bechuanaland border.



WEST VIRGINIA PULP & PAPER CO. PHOTO

U.S. WATER REQUIREMENTS will increase sharply in the future, according to estimates of the U.S. Department of Commerce. Irrigation will continue as the No. 1 user.

pipelines. Whereas southern California can afford aqueducts 500 miles long, a city of 1,000 to 5,000 people can afford to pipe water only 10 miles or so because so few share the cost of the pipeline. Such a city must utilize the water in the ground.

Webster, S.Dak., and Buckeye, Ariz., have desalination plants that furnish about 250,000 gallons each per day. In a process known as electrodialysis, electric power is used to pull the salts out of the water through plastic membranes. This process is used in many parts of the world, and over 100 such plants have been installed, particularly along the south shore of the Mediterranean and in the Middle East. The cost of fresh water produced by this process ranges between 20 cents and 80 cents per 1,000 gallons ($60 to $240 per acre-foot). These costs will be reduced as a result of research and development conducted by the manufacturers of the membranes and the Office of Saline Water, U.S. Department of the Interior.

Distillation by vapor compression is also useful for purifying brackish waters, particularly water with a high mineral content. Carlsbad, N.Mex., has a vapor compression plant, as do many ships and land-based installations of the U.S. Navy.

CALIFORNIA AQUEDUCT will transfer water from the northern part of the state to the densely populated south.

ENGINEERING NEWS-RECORD

The Office of Saline Water has experimented with many types of distillation units, but the most successful has been the flash-type, multiple-effect evaporator. The evaporator will desalinate water for about $1 per 1,000 gallons at a volume of about one million gallons per day. Distillation is frequently used for installations on large ships; on many islands, including Aruba, Curaçao, and the Virgin Islands; and in arid regions, such as Kuwait.

The Metropolitan Water District of Southern California, together with the Office of Saline Water and the U.S. Atomic Energy Commission, conducted a study in 1965 to determine whether nuclear power can be utilized to produce fresh water from the sea by evaporation. The results indicated that it may be possible to desalinate water for as little as 20 cents per 1,000 gallons at a rate of 150 million gallons per day. Up to 750,000 kilowatts of electric power would be generated by the high-pressure steam coming from the nuclear reactor as it drives turbines connected to electric-power generators. The leftover low-pressure steam would be used to distill sea water. It is not known how great the demand will be for large plants of this type, but such large plants lower the cost of distillation.

An International Symposium on Water Desalination was held in Washington, D.C., in October 1965, with more than 70 countries represented. It was evident from the discussions that many countries are watching progress in saline water conversion, particularly because the water-short countries are also short of electric generating capacity. Since economic growth depends on adequate water and electricity, the future is bright if costs of power and water can be lowered to reasonable rates by producing them in conjunction. (See also CHEMISTRY.)

PROSPECTS FOR THE FUTURE

The water supply situation in the world will improve as engineers harness the flood waters from many of the world's small and great rivers. The potential of a river such as the Mekong in Southeast Asia is breathtaking. If its waters could be used for peaceful purposes, great economic development in the area might be realized through a build-up of agriculture, industry, and commerce to support exploding populations in developing nations. "Peace through water" could also well be the slogan for the future of West Pakistan and India, Israel and Jordan, and other troubled areas in Africa and Asia.

Water shortage and water pollution problems can be solved. Engineers know how to apply the principles of science to solve these problems. The major problem is communication between engineers and the public, so that the public becomes willing to pay for good water and demands that political leaders supply it.

Much good has come through the activities of such organizations as the League of Women Voters, the Isaak Walton League, the Sierra Club, and other conservation groups which put pressure on state and national legislative bodies to bring about an increase in water quality control measures. Water supplies for the future depend on the continued demand for good water and the public's willingness to pay for it.

ROLF ELIASSEN
Professor of Civil Engineering
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WEATHER

The weather in 1965 showed more than the usual amount of irregularities. Storms and other disturbances led to disastrous losses in lives and property. In the United States, the Midwest was hit hard by tornadoes and floods; the Southern states were hard hit by hurricanes; and in the Northeast, continued drought seriously depleted the water supply. Weather anomalies in other countries brought cold, snow, floods, and violent storms.

Winter. The meteorological winter of December 1964 to February 1965 began with record-breaking amounts of rainfall in the Pacific Northwest that caused devastating floods in California, Oregon, Washington, Idaho, and Nevada. The death toll was 48 persons; property damage was $1 billion.

Snowfall was heavy throughout the season in the western mountains of the United States. In the upper Mississippi drainage area, February snows were exceptionally heavy. Western Texas and most of Florida also had above-average precipitation.

Temperatures in areas between the Rockies and the Sierras were up to 4° F warmer than average. Most of the East had near-average temperatures. Unusual cold prevailed in Montana, North Dakota, and Alaska—5 to 10° below the mean.

Abroad, a tropical disturbance in December caused storm surges in India and Ceylon, resulting in about 1,800 deaths. Some 200 persons were drowned at Dhanushkodi, Madras, and 500 died on the island of Rameswaram.

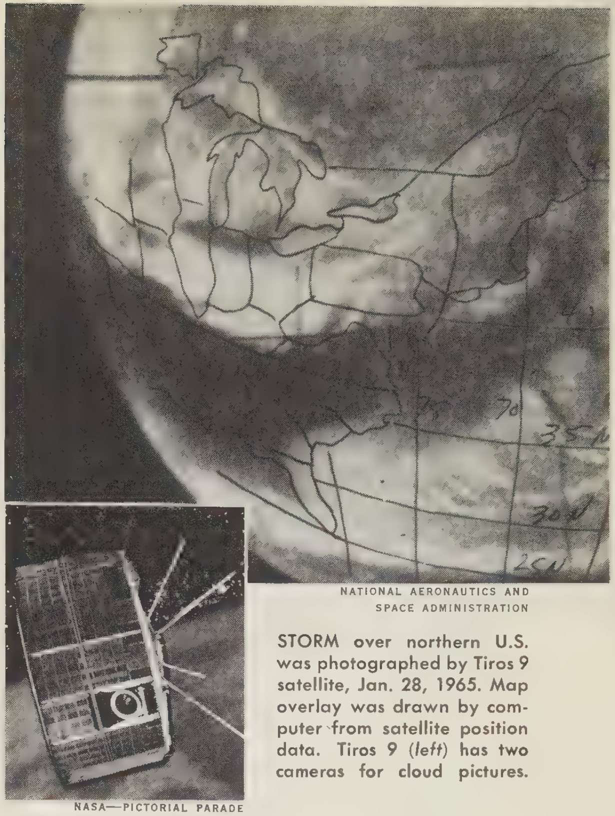
Spring. The spring season (March–May 1965) was much delayed in most areas of the United States. Near-record cold prevailed in March from Montana to the Great Lakes. Snowfall and snow cover were much heavier than usual in Minnesota and Wisconsin. This led to severe floods in the upper Mississippi valley in April, with river stages up to four feet higher than any previously recorded. The central section of St. Paul was flooded, and more than 20,000 people were left homeless. The flood reached Iowa in April, and Missouri in May.

On April 11, the worst outbreak of tornadoes since 1925 hit Wisconsin, Illinois, Indiana, Michigan, and Ohio. The 37 recorded tornadoes caused 242 deaths, injured 2,500 persons, and resulted in damages estimated at $250 million. May brought further devastating tornadoes to the Great Plains. On May 8 a one-day record of 40 tornadoes was set.

Abroad, a tropical cyclone from the Bay of Bengal hit the Dacca area of East Pakistan in May. More than 1,400 persons were reported killed, and a million others were made homeless. In Puerto Rico and the Virgin Islands, prolonged drought caused crop failures, cattle losses, and water shortages.

Summer. The summer (June–August 1965) was a cool season, with below-average temperatures in most parts of the United States. In the Northeast, from Maryland into New England, and in parts of Ontario, extended drought seriously depleted water resources. A four-year rainfall deficiency over the Delaware and Hudson River watersheds forced the federal government to declare the worst hit areas of Pennsylvania, New Jersey, New York, and Connecticut disaster areas. New York City had to order water conservation measures. (See WATER SUPPLY.)

In other parts of the world, about 120 persons were killed by floods and 142,000 were left homeless in Korea. Floods caused much damage in central Germany, and Danube floods affected Hungary. All of these weather anomalies were traced to displacements in the usual patterns of westerly winds circling the middle latitudes. Wind changes also may have caused Argentina's coldest winter in 15 years, as well as two days of snow in South Africa.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA—PICTORIAL PARADE

STORM over northern U.S. was photographed by Tiros 9 satellite, Jan. 28, 1965. Map overlay was drawn by computer from satellite position data. Tiros 9 (*left*) has two cameras for cloud pictures.

Autumn. The autumn season (September–November 1965) was ushered in by severe weather catastrophes in widely separated areas. Hurricane Betsy, following an erratic path, dealt heavy blows to Nassau in the Bahamas, Miami and the Florida Keys, and finally to lower Louisiana and New Orleans, where 30,000 persons were left homeless. In all, the toll was over 90 deaths and $500,000,000 in damage.

Heavy rains deluged southern California. In 10 days of heavy rain, the Los Angeles area received eight times as much rainfall as the average November amount. However, in the northeast from New York to Virginia, the drought intensified.

Over the United States the autumn season was somewhat warmer than average except in Montana and the Dakotas, which suffered early cold blasts.

Abroad, severe floods struck Italy, causing over 100 fatalities and heavy property damage. Typhoon Shirley caused havoc in Honshu and Hokkaido, Japan, killing 50 persons. Early winter weather hit northern and western Europe, and the cold caused power shortages in Great Britain.

Storms in 1964. Complete storm statistics for 1964 showed a record number of tornadoes. During the year, 713 observed tornadoes killed 73 persons. Other windstorms caused 64 deaths.

In the North Atlantic there was an above-average number of 12 tropical cyclones, of which six reached hurricane intensity. Four of the hurricanes and two other tropical storms affected the U.S. mainland—the highest number since 1933—and Florida alone suffered from three hurricanes. Casualties were moderate, with 49 deaths in the United States. However, 214 fatalities were caused in the Antilles by hurricane Cleo.

In the eastern North Pacific, six tropical cyclones

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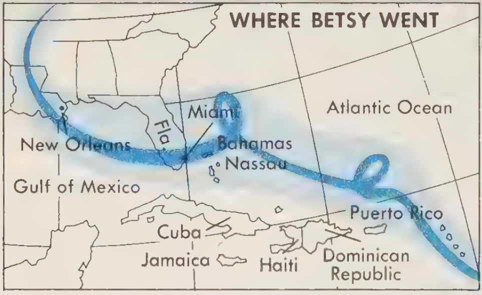
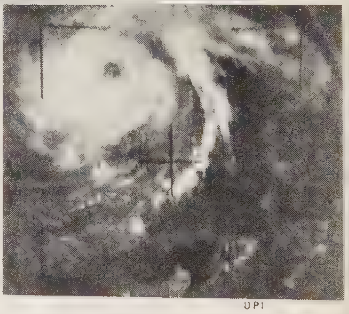




UPI

HURRICANE BETSY lashed Coast Guard Station (*above*) at Miami, Fla., in September 1965. Map (*left*) shows the twisting path of Betsy, which also hit New Orleans and caused heavy damage. Photograph of hurricane Betsy (*right*) was taken by Tiros 10 weather satellite when storm was 250 miles from Miami.

occurred, but no severe damage was reported. In the western North Pacific, 44 tropical disturbances were observed, including 26 of typhoon strength. Typhoon Opal had an unusually large radius of 650 miles. Six typhoons struck Vietnam.

Tropical Storm Research. Hurricanes often spawn tornadoes in their peripheral areas. Recent investigations show that such tornadoes form most frequently at 100 to 150 nautical miles from the hurricane center, and to the right of the hurricane with respect to the direction of its path. More than half of the tornadoes are in the right front quadrant of the hurricane, and another third are in the right rear quadrant.

Previously, the dissipation of hurricanes over land usually was attributed to increased surface friction. However, detailed analyses of the energy sources and energy dissipation have shown that a hurricane weakens because the heat source at the earth's surface is removed. This heat source is the warm subtropical ocean water that contributes both the sensible heat and the latent heat that maintain the storm.

Research in 1965 verified that tropical storms set a new 24-hour world record for rainfall in 1952, when 73.62 inches of rain fell at Cilaos on Réunion Island in the Indian Ocean. The old record was 45.99 inches at Baguio, the Philippines, in 1911.

Thunderstorms. Investigations of the propagating storm systems in the Great Plains have shown that they consist of individual convective cells with a lifetime of 20 to 30 minutes. New cells form to the right of existing cells. This leads to a movement of the whole system to the right of the paths of the individual cells. Radar echoes from these intense storms indicate that they occur at heights up to 65,000 feet. When the radar echo indicates a height above the level of the tropopause, hail is nearly always present.

In some of the most violent convective storms, a cloud-free vortex that reaches into the stratosphere is observed. The vortex can bring a large amount of stratospheric air into the troposphere, and with it the remaining radioactive particles from atmospheric nuclear tests. The storm rains bring the particles to the ground, creating hot spots. Areas in the wake of heavy thunderstorms have been reported to contain high radioactivity and to receive occasional heavy soil contamination by strontium-90.

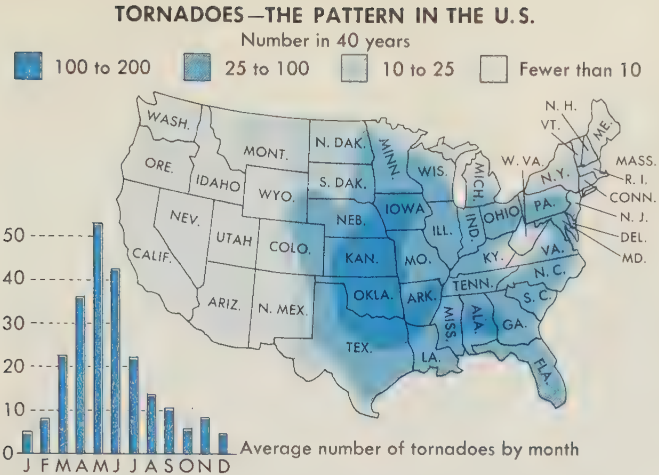
Slitless spectroscopy of lightning indicates temperatures of 24,000° Kelvin. In the stroke channel, the pressure has been calculated to be 30 to 50 atmospheres, and the electron densities are a million trillion electrons per cubic centimeter.

Cloud Physics. Four summers of observations of convective clouds in Missouri have shown that ice and snow pellets are present when the cloud tops reach a temperature of $-10°$ centigrade. There seem to be enough naturally available pellets to start the precipitation process. This finding casts some doubt on the value of seeding convective clouds with ice nuclei to induce rain.

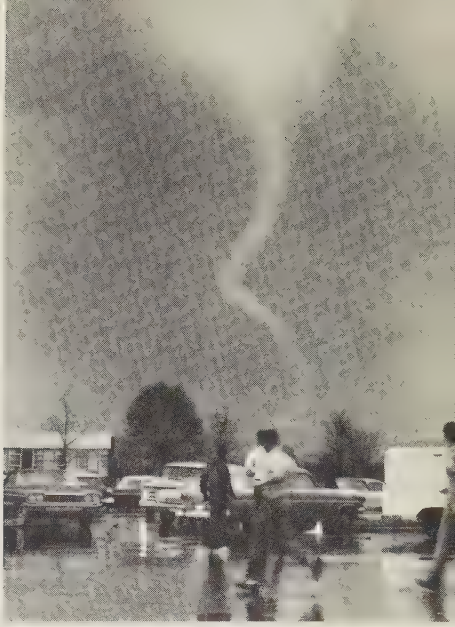
Observations of thunderstorms by vertically scanning radar indicate that intense radar echoes follow cloud-to-ground lightning discharges. The radar echoes are caused by the heavy gushes of rainfall after a discharge. Within 30 seconds of the discharge, the mass of some droplets increases 100-fold, probably because electrostatic forces lead to coalescence. Laboratory tests indicated that the collisions of droplets, in the presence of strong electrical fields, overcome their surface forces and lead to coalescence.

Several crystalline organic substances have shown high nucleating power for subcooled water. Among these are vanillin, *cis*-terpin, *cis*-terpin hydrate, and urea. Urea appeared to be as effective as dry ice in initiating shower formation. Promising results have been obtained in producing holes in the fog along the Pacific Coast by spraying saturated solutions of ammonium nitrate in water.

Systematic surveillance of noctilucent clouds in high latitudes has revealed a periodicity of these luminous phenomena at altitudes between 250,000



THE NEW YORK TIMES



WIDE WORLD

TORNADO swoops down on Conway, Ark., on April 11, as young men seek safety (*right*). Map and bar chart (*above*) show 40-year tornado pattern in the United States.

and 300,000 feet. These clouds are assumed to be formed from an accumulation of interplanetary particles on which water vapor freezes. Most of these cloud systems are 6,000 to 12,000 feet thick, and they may extend over 1,000 miles. (See also ATMOSPHERE RESEARCH.)

Radiation. Sharp decreases in solar radiation were observed at the South Pole station from November 1963 through 1964. The monthly radiation values ranged from 23 to 78 percent less than the values recorded in the previous five years. At Mauna Loa in Hawaii, reductions ranging from 3 to 14 percent have been noted in the same time interval. Both sites are unaffected by local disturbances. The changes were attributed to the ashes thrown into the air by eruptions of Mt. Agung on Bali in 1963.

These observations were corroborated by photoelectric measurements of starlight at the Cerro Tololo Observatory in Chile. The measurements showed less starlight than normal. On the basis of the measurements, it was estimated that about 100 particles of dust per liter are in the air at altitudes from 35,000 to 70,000 feet, for a total of about a million metric tons. At the end of 1964, two tenths of a star magnitude was blocked by the dust, and this condition is expected to persist for several years before a return to normal. These observations have revived the hypothesis that volcanic eruptions may cause major weather anomalies.

Satellite Meteorology. Satellites are becoming a major tool for weather analysis and forecasting. In 1965, four weather satellites furnished useful information. Tiros 9 was launched on Jan. 22, 1965, and Tiros 10 was launched July 1. They joined Tiros 7 and Tiros 8. On June 19, 1965, Tiros 7 completed two years of flawless operation.

During 1965 the Tiros satellites sent about 300,000 cloud pictures to earth. On Feb. 13, 1965, Tiros 9 enabled meteorologists to view the whole earth's cloud cover for the first time. A photomosaic of 450 individual pictures transmitted by the satellite marked a milestone in weather analysis.

Data sent from Tiros 7 have made it possible to estimate the heat budget of the whole earth. It was found that water vapor movements transport 40 trillion calories of latent heat from the Southern to the Northern Hemisphere each day. This transfer is compensated for by an equivalent southward heat transport by ocean currents. During winter in the Northern Hemisphere, there is a large northward flow of heat in all latitudes from 20° S to the North Pole. In all other seasons, the heat flow is predominantly southward in all latitudes between 15° N and the South Pole.

The high-speed upper winds generally known as jet streams are often clearly indicated in the cloud-pattern pictures sent back from the satellites. Surface observations had given the impression that a polar-front jet stream and a subtropical jet stream meander separately around the hemisphere. The satellite pictures show that the two streams occasionally cross each other, with the subtropical jet overriding and even merging with the polar-front jet. This affects cloud patterns and rainfall.

On June 15, 1965, the world weather center at Suitland, Md., relayed to Paris, France, via the Early Bird satellite, a weather mosaic of the Northern Hemisphere obtained from Tiros 9. Regular weather analysis and computer-prepared forecast charts also were sent via satellite to Paris to be forwarded from there to other European weather centers. This development foreshadows a new era in meteorology with the linking of the three world weather centers in Moscow, Melbourne, and Suitland by satellite communications circuits, enabling the centers to distribute weather charts almost instantaneously to national and local forecast offices.

New Government Agency. In July 1965, President Johnson, with congressional concurrence, ordered a major organizational change in the nation's weather- and disaster-warning services by merging the Weather Bureau, the Coast and Geodetic Survey, and the Central Radio Propagation Laboratory. (See ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION.)

H.E. LANDSBERG
Director, Environmental Data Service
Environmental Science Services Administration

WEIGHTLIFTING. See SPORTS.

WELFARE PROGRAMS. See ANTI-POVERTY PROGRAM; CHILD WELFARE; OLD AGE; SOCIAL SECURITY.

WEST INDIES. See articles on the countries (CUBA, DOMINICAN REPUBLIC, etc.) in the Caribbean area; and also COMMONWEALTH OF NATIONS.

WEST VIRGINIA

Although there is agreement in West Virginia that the state constitution needs extensive revision, there was wide disagreement in 1965 on how to accomplish it. (Gov. Hulett C. Smith had made constitutional revision a prime aim in his campaign in 1964.) A legislative measure called for a referendum in November 1965 on the question of holding a constitutional convention. If the voters approved the convention, delegates would be elected in the spring of 1966, and the convention itself would be held in July of that year. By mid-session the measure apparently was headed for approval, and the legislators tabled several proposed amendments scheduled for voter ratification in 1966.

In the summer, however, the proposed apportionment of convention delegates was seriously questioned, and Governor Smith, as a friend of the court, instituted proceedings in the state Supreme Court to clarify the matter. The court unanimously agreed with the critics of the apportionment proposal, and the referendum was called off. Since the governor declined to convene a special session of the Legislature to settle the matter, it was expected that a new approach would be tried in the 30-day legislative session beginning Jan. 12, 1966.

Legislation. The 1965 Legislature was one of substantial accomplishments. It adopted a three-year program—part of Governor Smith's kindergarten-through-adulthood approach to public education—upgrading the salaries and the status of public school teachers. In March it repealed the death penalty, making West Virginia the tenth state to take such a step. Other measures included permanently raising both the consumers' sales tax and the use tax to a 3% level, after a number of temporary increases from a 2% base; adopting a junior driver's license, which places 16-year-old drivers on probation for a two-year period; taking steps to control "dummy corporations" by calling for full details on officers and stockholders; and giving the governor more sweeping executive powers.

WEST VIRGINIA · Information Highlights

Area: 24,181 square miles.
Population: 1,797,000 (1965 est.).
Chief Cities (1965 est.): Charleston, the capital (85,000); Huntington (81,500); Wheeling (50,000); Parkersburg (46,500); Weirton (29,500); Fairmont (26,000); Clarksburg (25,000); Morgantown (21,000).
Government: *Chief Officers*—governor, Hulett C. Smith (Democrat); secy. of state, Robert D. Bailey (D); atty. gen., C. Donald Robertson (D); treas., John H. Kelly (D); supt. of pub. instr., Rex M. Smith; chief justice, Chauncey H. Browning. *Legislature*—West Virginia Legislature (convened Jan. 12, 1965); Senate, 34 members (27 Democrats, 7 Republicans); House of Delegates, 100 members (91 D, 9 R).
Education: *School enrollment* (1964–65)—public elementary, 255,000 pupils (8,240 teachers); public secondary, 192,000 pupils (6,760 teachers); nonpublic schools, 20,000 pupils (750 teachers); college and university (fall 1964), 39,719 students. *Public school expenditures* (1964–65)—$129,000,000 ($315 per pupil); average teacher's salary, $4,590.
Public Finance (fiscal year 1964): *Revenues,* $441,565,000 (3% sales tax, $104,684,000; motor fuel tax, $38,519,000; federal funds, $92,289,000). *Expenditures,* $411,624,000 (education, $120,094,000; health, welfare, and safety, $66,557,000; highways, $97,073,000). *State debt,* $54,154,000.
Personal Income (1964): $3,531,000,000; average annual income per person, $1,965.
Public Assistance (fiscal year 1965): $42,043,200 to 137,132 recipients (aged, $6,532,400; dependent children, $31,624).
Labor Force (employed persons, July 1965): *Agricultural,* 35,100; *nonagricultural* (wage and salary earners), 478,600 (23.7% manufacturing, 15.0% trade, 16.1% government). *Unemployed persons* (July 1965)—44,900.
Manufacturing (1963): Value added by manufacture, $1,834,458,000 (primary metals, $390,295,000; nonelectrical machinery, $36,073,000; electrical machinery, $60,224,000; fabricated metals, $77,954,000; food and products, $71,572,000).
Agriculture (1964): *Cash farm income,* $103,944,000 (livestock, $75,243,000; crops, $24,716,000; govt. payments, $3,985,000). *Chief crops* (tons)—apples, 127,200 (ranks 7th among the states); peaches, 18,000 (rank, 12th); hay, 808,000; corn for grain, 85,000; potatoes, 25,100; wheat, 16,200; oats, 11,500.
Mining (1964): *Production value,* $822,691,000 (ranks 6th among the states). *Chief minerals* (tons)—coal, 141,409,000 (ranks 1st among the states); salt, 1,033,000 (rank, 7th); natural gas, 203,872,000,000 cubic feet (rank, 8th); stone, 7,481,000; sand and gravel, 5,472,000; petroleum, 3,370,000 barrels.
Transportation: *Roads* (1965), 36,524 miles (12,427 paved); *motor vehicles* (1965), 727,798; *railroads* (1964), 3,692 miles; *aircraft* (1964), 676 (53 airports).
Communications (1965): *Telephones,* 599,900; *television stations* (1964), 9; *radio stations* (1964), 69; *newspapers* (1965), 30 (daily circulation in 1964, 482,761).

Economy. West Virginia continued its economic advance in 1965. A record number of building permits were issued—30% above the 1964 level. By mid-November the state Chamber of Commerce reported that "after ten months, we are ahead of 1964 in all respects."

Grants and Projects. Substantial future progress in the state was promised by several federal grants. These included the establishment of new mountain recreation areas and the beautifying of highways. (The latter grant was in addition to the state's allocation for the Interstate Highway System, in which West Virginia continued to trail behind some 40 other states in mileage completed.)

West Virginia University and the state's Medical Center at Morgantown will be the site of the National Environmental Health Center's Appalachian Branch, a $4 million project to begin in 1966.

Deaths. William C. Marland, who became West Virginia's youngest governor in 1954, died late in November. A victim of alcoholism in the late 1950's, Marland had dropped from public view. In March 1965 he reappeared as a taxi driver in Chicago, fully recovered from his illness. He then returned to work in his native state during the summer, only to fall victim to cancer.

Joe Burdett, West Virginia's secretary of state since 1958, died on May 12. He was succeeded by Robert D. Bailey.

DONOVAN H. BOND
Director of Development and Professor of Journalism, West Virginia University

WESTERN SAMOA

Western Samoa, with aid from the United Nation's Economic Commission for Asia and the Far East, embarked on a program of economic development in 1965. Some government officials expressed fear that the development of tourism, one goal of the plan, might introduce undesirable changes in the traditional life of the island republic.

Economic Development. H.L. Spence, Jr., UN regional representative for the Western Pacific, headed the staff of international experts that began work on the development plan early in 1965. He said that the goal of the plan was to strike a balance between the island's traditional way of life and economic progress.

An important feature of the economic development program is a $3 million harbor development plan, which will include land reclamation in the harbor area, and the building of new wharves capable of berthing cruise liners.

One of the effects of the development program will be the diversification of Western Samoa's economy, now heavily dependent on cocoa beans, copra,

WESTERN SAMOA · Information Highlights

Area: 1,097 square miles.
Population: 122,000 (July 1, 1964 est.).
Chief Cities (1961 census): Apia, the capital, 21,699.
Government: *Head of State*—Malietoa Tanumafili II (took office April 5, 1963, for life); *Prime Minister*—Fiame Mata'afa Faumuina Mulinu'u II. *Parliament*—Legislative Assembly, 47 members.
Religious Faiths: Christian, 99.7% of population.
Education: *Literacy rate* (1951)—86% of indigenous population aged 15 and over. *Total school enrollment* (1960)—27,430 (preschool and primary, 25,902; secondary, 922; teacher-training, 202; technical, 270; higher, 134).
Finance (1964 est.): *Revenues,* $5,589,000; *expenditures,* $5,808,000; *monetary unit,* Samoan pound (0.3571 pound equals U.S.$1).
Crops (metric tons): Bananas (1963–64), 27,000; cocoa beans (1964–65), 3,800.
Foreign Trade (1963): *Exports,* $2,561,000 (chief exports: copra, $2,439,000; cocoa beans, $2,341,000; bananas, $2,310,000); *imports,* $3,007,000 (chief imports: meat and preparations, $736,000; transport equipment, $546,000; sugar, $305,000). *Chief trading partners:* New Zealand (took 41% of exports, supplied 31% of imports); Britain (took 25% of exports, supplied 14% of imports).
Transportation: *Roads* (1964), 450 miles; *motor vehicles* (1963), 1,364 (automobiles, 680); *principal airport,* Apia.
Communications: *Telephones* (1964): 1,222; *radios* (1962), 5,800.

and bananas. A furniture industry is being developed to make use of native teak and mahogany.

Tourism. The tourist industry has never received much encouragement in Western Samoa, but it will be developed through the building of new hotels and other tourist facilities. New airstrips are planned to bring tourists from nearby American Samoa, a regular stop on some international airline routes.

Education. A College of Tropical Agriculture, built with United Nations help, opened in 1965.

WHOLESALE SELLING

The volume of merchant wholesalers' sales in the United States in the first half of 1965 continued the upward trend that started early in 1961. By mid-1965, sales totaled a record $84.7 billion, or 8% higher than in the first half of 1964.

MERCHANT WHOLESALERS' SALES, 1963–65

	1963	1964	1964	1965
	Full year		First six months	
	(Millions of dollars)			
Total	152,302	164,584	78,606	84,728
Durable goods establishments[1]	62,924	68,983	33,052	36,549
Motor vehicles, automotive equipment	9,303	10,035	4,842	5,329
Electrical supplies, apparatus	4,094	4,612	2,139	2,316
Electrical appliances, TV, radio, electronic parts	5,264	5,648	2,577	2,745
Furniture, home furnishings	3,109	3,355	1,612	1,590
Hardware, plumbing, heating equipment	6,830	7,213	3,397	3,716
Lumber, construction materials	7,239	7,277	3,538	3,588
Machinery, equipment, supplies	16,646	18,558	9,110	10,019
Iron, steel, and products	4,506	5,119	3,242	2,509
Nonferrous metals	1,721	2,087	964	1,182
Scrap, waste materials	3,282	3,996	1,882	2,282
Jewelry	932	1,076	472	540
Nondurable goods establishments[1]	89,377	95,602	45,555	48,178
Groceries and related products	31,622	34,325	16,541	17,556
Beer	3,270	3,611	1,687	1,709
Wine, distilled spirits	5,193	5,581	2,533	2,640
Drugs, drug proprietaries, sundries	3,452	3,675	1,737	1,861
Paints, varnishes	360	379	189	190
Other chemicals, allied products	2,083	2,242	1,112	1,247
Tobacco, tobacco products	4,643	4,786	2,273	2,353
Apparel and accessories	3,057	3,403	1,506	1,602
Dry goods, notions	2,605	2,900	1,385	1,545
Paper, paper products	4,520	4,896	2,380	2,526
Farm products (raw materials)	12,266	12,481	5,906	5,723
Other nondurable goods	14,598	15,589	7,448	8,256

[1] Totals include data from some kinds of business not shown separately.
Source: U.S. Department of Commerce.

Inventories. Merchant wholesalers' inventories totaled $17.3 billion in June 1965, about $1.4 billion higher than a year earlier. The accumulation in total inventories was about proportionate to the rise in sales, and the ratio of stock to sales was equivalent to 1.8 months of sales.

Durable Goods. In the first half of 1965, sales by merchant wholesalers of durable goods totaled $36.5 billion. This was an increase of 10% over the same period of 1964. Dealers in iron and steel reported the largest gain, 29%. Suppliers of business machinery and equipment, electrical supplies and apparatus, and air-conditioning and refrigeration registered increases ranging from 11% to 14% over 1964, reflecting the boom in business investment in new plant and equipment. With little change in residential construction from 1964, sales improvements were restricted for dealers in lumber and construction materials, furniture and home furnishings, and electrical appliances.

Nondurable Goods. Merchant wholesalers of nondurable goods registered sales of $48.2 billion in the first half of 1965, or 6% over the first six months of 1964. Distributors of chemicals, drygoods, and farm supplies showed increases of from 11% to 12%. Wholesalers of groceries, apparel, and paper products each had a 6% sales rise; dealers of farm products (raw materials), a 3% decline. This was the only group failing to register a sales improvement.

LAWRENCE BRIDGE
Office of Business Economics
U.S. Department of Commerce

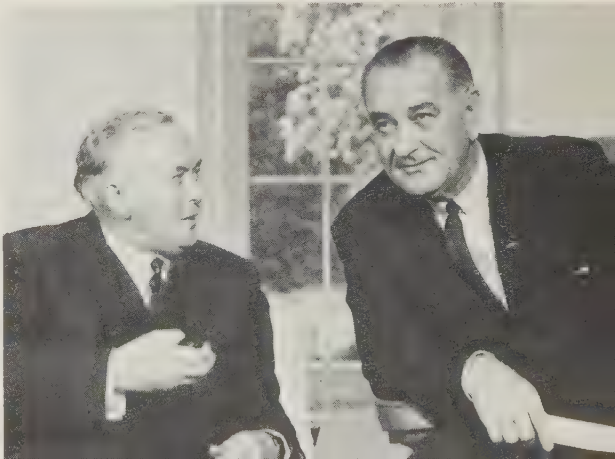
WILDLIFE. See CONSERVATION; HUNTING AND FISHING.

WILKINS, Roy. See biographical sketch under CIVIL RIGHTS.

WILSON, Harold

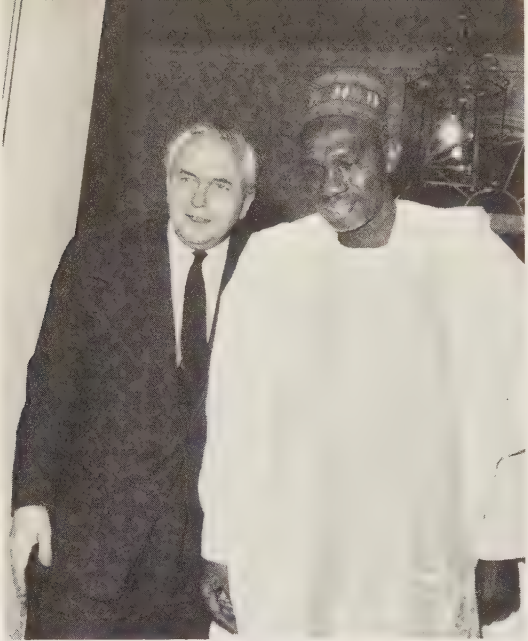
Prime Minister of Great Britain: b. Huddersfield, Yorkshire, England, March 11, 1916.

Wilson, who became prime minister in October 1964, traveled much of the time during his first full year in office. He visited several European and African countries and, in April and again in December, the United States. During 1965 he was faced with two major crises. The first was the continuing problem of governing Britain with the Labour party having only a slim (from one to three seats) parliamentary majority (see GREAT BRITAIN). The other concerned the Rhodesian situation (see RHODESIA).



WILSON AND JOHNSON confer at White House during British prime minister's visit to United States in April.

PICTORIAL PARADE



KEYSTONE

WILSON AND NIGERIAN PRIME MINISTER Sir Abubakar Tafawa Balewa pause outside No. 10 Downing Street on Dec. 14, 1965. Balewa, then in London to discuss Nigerian political crisis, was killed during January 1966 army coup.

Travels. With Foreign Secretary Michael Stewart, Wilson visited West Germany on March 6–9 and France on April 2–3. In Bonn, Wilson and West German Chancellor Ludwig Erhard discussed German reunification, European security, disarmament, the Western alliance, possible ways of reducing the cost to Britain of its troops in West Germany, and the forthcoming visit of Queen Elizabeth II to West Germany. In Paris he talked with President Charles de Gaulle chiefly about world economic problems and Anglo-French cooperation on aviation. (See also EUROPE.)

In New York on April 14, Wilson met briefly with UN Secretary General U Thant, and later made a major speech on economic policy before the Economic Club of New York. On April 15, in Washington, D.C., he discussed British monetary policies with President Johnson.

Wilson went to Rome on April 28 for two days of talks with Italian Prime Minister Aldo Moro and Foreign Minister Amintore Fanfani. They discussed NATO, European unification, and international cooperation. On April 28, Wilson had an audience with Pope Paul VI at the Vatican.

Wilson visited the United States again from December 15 to 17. In an address to the United Nations on December 16, he urged UN support for British policies in Rhodesia. On December 16–17, he met with President Johnson in Washington, where the two leaders exchanged views on U.S. policy in Vietnam.

Rhodesia. On what was described as "one of the boldest political missions of his career," Wilson traveled to Salisbury, Rhodesia, on October 24. His purpose was to prevent a final break between Britain and Rhodesia over the question of Rhodesian independence. After five days of inconclusive meetings with Rhodesian Prime Minister Ian Smith, Wilson returned home. (See AFRICA.)

Career. (James) Harold Wilson attended Oxford on a scholarship and graduated in 1937 with first-class honors. He remained at Oxford as a lecturer in economics and a fellow of University College, where he came under the influence of Lord Beveridge, the architect of the British welfare state. Wilson served in the War Cabinet Secretariat (1940–41) and in the Ministry of Fuel and Power (1942–45), then was elected to Parliament (1945). In the Labour government of 1945–51, he held various important posts. He was elected leader of the Labour party on Feb. 14, 1963, succeeding Hugh Gaitskell, who had died.

WINE

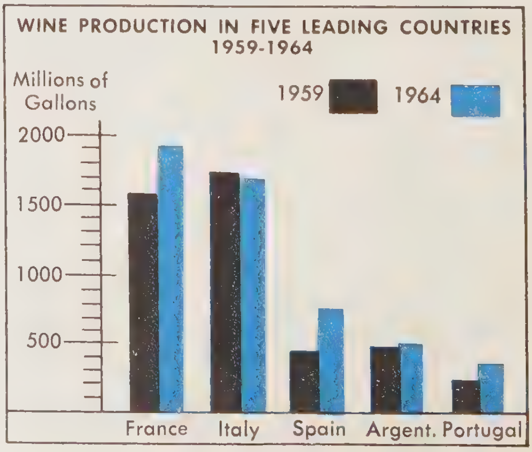
World production of wine increased to 7.098 billion gallons in 1964, from 6.064 billion gallons in 1963. U.S. production in 1964 amounted to 188,746,800 gallons, of which 162,057,000 gallons, or 85.9%, came from California.

Distribution. Of the 185,614,584 gallons of wine entering distribution channels in the United States in 1964, California shipped 143,484,000 gallons, representing 77.3% of the market. The other states contributed 14.3%, and foreign countries, 8.4%. The total wine movement in the United States, which had a per capita consumption of 1.0 gallons, consisted of 70,345,001 gallons of table wines, 85,562,172 gallons of dessert wines, 23,164,736 gallons of vermouth and other special natural wines, and 6,542,675 gallons of sparkling wines.

Consumption. In 1956 the U.S. consumption pattern, which had remained nearly constant since the repeal of prohibition in 1933, showed a trend from dessert wines to table wines. This trend continued, until by 1964 the consumption of dessert wines, including vermouth and other flavored wines, had declined 15.9%. In the meantime, the consumption of table wines had increased 32.5%, and that of sparkling wines, 150%.

Continued general prosperity and great demand maintained high prices for the premium wines of France and West Germany. Five years of short crops and an increasing demand for premium California table wines resulted in their prices approaching those of some of the European wines. The 1964 vintage in western Europe was generally fine except where the harvest was damaged by rain.

New Developments. One of the most important recent developments in wine technology was the replacement of wood and concrete fermentation tanks with tanks of stainless steel. The new tanks greatly reduce sterilization problems and increase fermentation control. Of almost equal importance was the



WORLD WINE PRODUCTION, 1963 AND 1964

Region	Production (in gallons) 1963	1964
World	6,064,628,900	7,098,700,382
Algeria	331,986,890	276,593,460
Argentina	502,615,113	515,681,575
France	1,482,099,151	1,936,440,000
Germany, West	159,354,810	189,693,213
Hungary	82,750,865	148,080,240
Italy	1,401,740,934	1,745,673,600
Portugal	346,646,923	365,618,193
Rumania	145,718,478	171,600,000
Spain	682,488,000	867,128,486
USSR	263,392,800	263,392,800[1]
United States	210,865,930	188,746,800
California	179,428,580	162,057,000
Yugoslavia	155,919,300	154,440,000

[1] 1963. Source: Office International de la Vigne, Paris, and California Wine Institute.

introduction of membrane filtration, which, for the first time in the history of wine making, offered a practical means for removing all yeast from wine, thus eliminating the need for excessive use of sulfur dioxide or pasteurization of sweet table wines.

H.W. BERG
Professor of Enology
University of California, Davis

WIRTZ, W. Willard. See biographical sketch under UNITED STATES.

WISCONSIN

Republican Gov. Warren P. Knowles, inaugurated on Jan. 4, 1965, faced a divided Wisconsin Legislature, with a Republican-dominated Senate and a Democratic-controlled House. The most significant legislation was in the field of education. The Legislature also reapportioned county board districts.

Legislation. The Wisconsin Legislature met in continuous session from January 13 to July 30 and, after a recess, from October 4 to November 4.

The Coordinating Committee for Higher Education was reorganized to give a majority to citizen members, rather than to university and college representatives. The Legislature also established two new public colleges to be under the jurisdiction of the State University, with overall control of programs vested in the Coordinating Committee.

Two legislative acts provided grants to students at higher educational institutions. One act provides direct grants on the basis of need. The second will subsidize Wisconsin students at public out-of-state, or private in-state schools if the students study certain courses not offered at public higher institutions in the state.

The mounting highway death toll prompted the enactment of an omnibus highway safety bill. The act provides for an increase in traffic patrol police, from 250 to 300; for highway construction to correct certain hazardous spots; and for a driver safety program. A $2 increase in vehicle license fees was approved to finance the highway program.

Other legislation allows certain prison inmates to leave prison daily to work at regular jobs.

Reapportionment of County Boards. On January 5 the Wisconsin Supreme Court ruled that the state's county boards must be reapportioned to provide more equitable representation. In March the Legislature passed a redistricting bill ending rural domination of county boards. The first elections under the new plan are scheduled for 1966.

Economy. Governor Knowles, elected on a promise to prevent increases in government spending and taxes, made efforts to broaden the state's tax base to meet the rising cost of government. He set up a Board of Economic Development and a Wisconsin Development Authority to encourage industrial expansion. At the end of the first quarter, 114 companies had expanded old plants or built new ones, and unemployment had fallen to 2.3%, the lowest rate since 1956. Personal income rose to $297 million in March 1965, an increase of 12% over the previous year.

WISCONSIN · Information Highlights

Area: 56,154 square miles.
Population: 4,166,000 (1965 est.).
Chief Cities (1965 est.): Madison, the capital (154,000); Milwaukee (765,000); Racine (94,500); Green Bay (82,500); Kenosha (76,000); West Allis (73,500); Wauwatosa (61,000).
Government: *Chief Officers*—governor, Warren P. Knowles (Republican); lt. gov., Patrick J. Lucey (Democrat); secy. of state, Robert Zimmerman (R); atty. gen., Bronson La Follette (D); treas., Mrs. Dena A. Smith; supt. of pub. instr., Angus B. Rothwell; chief justice, George R. Currie. *Legislature* (convened Jan. 13, 1965); Senate, 33 members (20 Republicans, 13 Democrats); House of Representatives, 100 members (53 D, 47 R).
Education: *School enrollment* (1964–65)—public elementary, 504,503 pupils (19,437 teachers); public secondary, 326,912 pupils (16,718 teachers); nonpublic schools, 292,100 pupils (8,320 teachers); college and university (fall 1964), 112,484 students. *Public school expenditures* (1964–65)—$394,000,000 ($532 per pupil); average teacher's salary, $6,125.
Public Finance (fiscal year 1965): *Revenues,* $1,146,132,658 (selective sales tax, $83,405,768; motor fuel tax, $84,934,762; federal funds, $161,734,578). *Expenditures,* $1,030,815,369 (education, $292,048,681; health, welfare, and safety, $156,019,043; highways, $188,830,767). *Net long-term state debt,* $176,528,000 (fiscal year 1964).
Personal Income (1964): $10,227,000,000; average annual income per person, $2,490.
Public Assistance (fiscal year 1965): $89,814,481 to 109,610 recipients (aged, $37,332,427; dependent children, $25,095,163).
Labor Force (employed persons, mid-July 1965): *Agricultural,* 224,000; *nonagricultural* (wage and salary earners), 1,332,600 (37% manufacturing, 20% trade, 15% government). *Unemployed persons* (mid-July)—55,300.
Manufacturing (1963): Value added by manufacture, $5,344282,000 (transportation equipment, $733,739,000; primary metals, $287,851,000; nonelectrical machinery, $981,227,000; electrical machinery, $592,727,000; fabricated metals, $373,900,000; food and products, $769,381,000; dairies, 244,592,000).
Agriculture (1964): *Cash farm income,* $1,199,077,000 (livestock, $990,067,000; crops, $161,218,000; govt. payments, $47,792,000). *Chief crops* (tons)—hay, 8,329,000 (ranks 1st among the states); alfalfa, 6,926,000 (rank, 1st); corn for grain, 2,944,000 (rank, 8th); oats, 1,694,000 (rank, 3rd); potatoes, 534,000 (rank, 6th).
Mining (1964): *Production value,* $70,007,000 (ranks 37th among the states). *Chief minerals* (tons)—iron ore, 587,000 (rank, 10th); zinc, 26,278 (rank, 10th); lead, 1,742 (rank, 11th); sand and gravel, 34,348,000.
Fisheries (1964): *Commercial catch,* 18,569,809 pounds. *Leading species*—alewives, 8,410,193 pounds; chubs, 4,135,617 pounds; yellow perch, 2,839,599 pounds.
Transportation: *Roads* (1963), 99,420 miles (92,450 paved); *motor vehicles* (1964–65), 1,893,867; *railroads* (1965), 9,396 miles, *airlines* (1965), 6 (130 airports).
Communications: (1965): *Telephones,* 1,805,400; *televison stations,* 18; *radio stations,* 128; *newspapers,* 38 (daily circulation, 1,159,399).

Budget. The governor's executive budget, however, was the highest in the state's history—$820 million. To provide the additional $70 million in revenues to meet the budget, the governor proposed an extension of the 3% selective sales tax.

Natural Disasters. Millions of dollars in property damage, but little loss of life, was caused in April by the flooding of the Mississippi River and by tornadoes.

Milwaukee Braves. The state and Milwaukee County tried to prevent the Milwaukee Braves National League baseball club from moving to Atlanta, Ga., and initiated legal proceedings against the team. (See MILWAUKEE.)

Apostle Islands. The U.S. Department of the Interior proposed in August that Wisconsin's Apostle Islands in Lake Superior be made a national lakeshore.

ANTON JACOBSON
Administrative Assistant
Office of the Attorney General of Wisconsin

WOOL

Two successive years of protracted drought and an unusually severe winter in parts of the Southern Hemisphere were expected to reduce the 1965–66 world wool clip to 5,654,000,000 pounds (greasy basis), compared with 5,768,000,000 pounds produced in 1963–64. U.S. production was expected to decline to an estimated 254,000,000 pounds in 1965.

Promotion and New Processes. A full-scale program using the new worldwide "wool mark"—a certification symbol for consumer protection awarded to quality-tested pure virgin wool apparel and carpets of pure wool pile—was featured in U.S. wool promotion in 1965. The wool textile industry continued to extend the processes for making all-wool products permanently creased and pleated, machine washable and dryable, and permanently mothproofed.

The U.S. Wool Textile Industry. During 1965 the wool textile industry in the United States experienced a dynamic recovery from the loss in consumption of the preceding year. Imports of apparel wool during the first eight months ran more than 70% ahead of the corresponding 1964 period, and industry consumption was 16% higher than in the previous year. In 1964, U.S. mills consumed 363,000,000 pounds of wool, or 11% of the world total, of which woven and knitted textiles used 232,500,000 pounds, and carpets, 122,500,000 pounds.

In general, the output of woven and knitted wool fabrics in the United States during 1965 was limited only by production capacity and by the supply of raw material.

WORLD PRODUCTION OF VIRGIN WOOL
(In million pounds, greasy basis)

Country and types	Average 1951–52 to 1955–56	1964–65	1965–66	
			Forecast	% of total
Australia	1,261	1,799	1,694	30
USSR	484	760	740	13
New Zealand	434	623	660	12
Argentina	393	419	430	8
South Africa	286	313	311	6
United States	296	265	254	4
Uruguay	199	187	190	3
Other countries	1,188	1,353	1,375	24
Total	4,541	5,719	5,654	100
Of which:				
Merino (fine)	1,725	2,327	2,240	40
Crossbred (medium)	1,680	2,176	2,188	38
Total apparel type	3,405	4,503	4,428	78
Carpet type	1,136	1,216	1,226	22

Source: Commonwealth Economic Committee.

World Consumption. In 1964, world wool consumption declined to 3,202,000,000 pounds from the 1963 peak of 3,332,000,000 pounds. However, the second quarter of 1965 provided signs that world wool consumption was increasing. A rise in raw wool prices during the 1963–64 season coincided with a shakeup in the economies of the Common Market countries, the United Kingdom, and Japan as their governments applied fiscal measures to stem inflation.

RUTH JACKENDOFF
Director, Department of Economics and Statistics
The Wool Bureau, Inc.

WORLD BANK. See INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT.
WORLD COURT. See LAW.

WORLD HEALTH ORGANIZATION

The World Health Organization, a specialized agency of the United Nations, is engaged in a worldwide effort to apply modern scientific and technological developments in medicine and public health.

Membership and Budget. Membership in WHO rose to 125 nations in 1965 when the newly independent Maldive Islands joined the organization. The World Health Assembly adopted a working budget of $42,442,000 for 1966. The new budget, to be met by national contributions, represented an increase of $2,935,000, or 7.43% over the 1965 budget.

Smallpox Eradication Campaign. The 1965 WHO theme "Smallpox—Constant Alert," was stressed on World Health Day, April 7. It was estimated that the eradication of smallpox throughout the world might be achieved within 10 years. The WHO campaign against the disease, begun in 1958, has eliminated smallpox in a number of countries. The disease remains endemic, however, in large areas of Asia and Africa.

1966 Theme. "Man and his Cities" was chosen as the WHO theme for 1966. The organization hopes to draw attention to increasing human needs, particularly mental health needs, in urban areas. In the past 100 years, during which time the population of the world has doubled, the population of the world's cities has increased by 500%.

Malaria. It was estimated that 813 million people, or 52% of the population of the formerly malarious areas of the world, have been freed of the disease. WHO urged countries where malaria eradication has been successful to maintain vigilance against the recurrence of the disease.

Cancer. In 1965 the World Health Assembly decided to establish an International Agency for Research on Cancer, with headquarters in Lyon, France. The agency will serve as a means through which participating states and WHO can cooperate in stimulating and supporting all phases of cancer research. Permanent activities of the agency will include the collection and dissemination of information on cancer epidemiology, and the training of research personnel. Participating countries are Australia, France, West Germany, Italy, Britain, the United States, and the Soviet Union.

Medical Research Reference Centers. A total of 91 WHO international and regional reference centers in 28 countries, together with over 200 collaborating laboratories in all parts of the world, form a network of science cooperation spanning the globe. The WHO centers provide final identification of unusual variants of disease-producing organisms, distribute standard substances for international yardsticks, encourage the use of uniform techniques, and help make the results of medical research internationally comparable. Most of them also provide specialized training.

Health Planning. Discussions in the assembly stressed the importance of health planning, especially in young nations. Health planning depends very largely upon the availability of statistics. In 1965 a WHO conference revised the 999 categories used in the International Classification of Diseases, Injuries, and Causes of Death. This classification helps assure internationally comparable morbidity and mortality statistics for research and health-planning programs.

R.L. COIGNEY, M.D.
Director, Liaison Office with the United Nations

WORLD'S FAIR, New York. See NEW YORK WORLD'S FAIR 1964–65.
WORTH, Irene. See biographical sketch under THEATER.
WRESTLING. See SPORTS.

WYOMING

In January 1965, Gov. Clifford P. Hansen asked the Wyoming State Legislature to enact more reform legislation than any governor had requested since the days of Gov. Joseph M. Carey (1911–15). The Legislature followed Governor Hansen's recommendations in repealing the ban on federal aid to education, passing an enabling act to allow urban-renewal projects, and raising the minimum wage to $1.00 an hour. It also allowed higher workmen's compensation payments, provided for many capital improvements at the state university and other institutions, extended free-port privileges, repealed laws prohibiting interracial marriages, and increased support for public schools.

Finance. The Legislature appropriated $50.5 million for the 1965–67 biennium—or about $10 million more than had been appropriated for the 1963–65 biennium. To raise the necessary revenue, the sales tax was increased from 2% to 2.5%. Also, municipalities were authorized to levy an additional 0.5% on a city or county option basis.

Reapportionment. After the Legislature had adjourned without passing an apportionment measure, a panel of three federal judges issued a decree on October 8 reapportioning the State Senate. The number of Senators was increased from 25 to 30. In general, the reapportionment increased the representation of more populous counties at the expense of sparsely settled rural counties.

Economy. The year 1965 was not a good one for Wyoming's economy. Completion of the Minuteman Missile program brought a slowdown in military installation activity at Cheyenne, while transfers of 550 oil company personnel from Casper to Denver, Colo., and other cities hurt the state's economy. The state's nonfarm work force in August totaled 104,300, or 3,000 below that of August 1964.

Oil and gas production continued at about the same high rate as in 1964, when its total value was $390 million. Uranium production in Wyoming declined because the Atomic Energy Commission again reduced the rate of production of enriched uranium.

Highway construction projects employed thousands of workers at many sites throughout the state. There was expansion in Sweetwater County's production of trona (a rare hydrous carbonate found in saline lake deposits) as two corporations increased their refining capacity and a third entered the field with a new plant.

Weather. Widespread floods in June caused two deaths and damage estimated at more than $2 million. In September a leak in Fontenelle Dam on the Green River threatened flooding of communities below the dam. The crisis continued for 10 days until the dam was repaired.

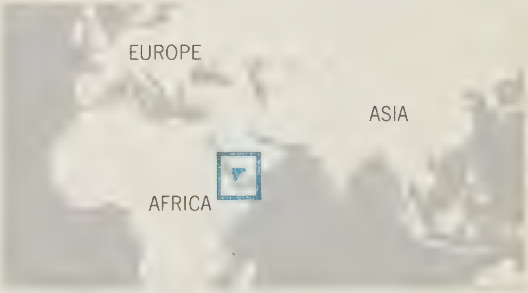
T.A. Larson
Head, Department of History, University of Wyoming

WYOMING · Information Highlights

Area: 97,914 square miles.
Population: 355,000 (1965 est.).
Chief Cities (1965 est.): Cheyenne, the capital (50,000); Casper (42,500); Laramie (19,000); Sheridan (11,500); Rock Springs (11,200); Rawlins (9,000); Riverton (8,000); Lander (6,000).
Government: *Chief Officers*—governor, Clifford P. Hansen (Republican); secy. of state, Mrs. Thyra Thomson (R); atty. gen., John Raper (R); treas., Everet T. Copenhaver (R); supt. of pub. instr., Cecil Shaw; chief justice, Glen Parker. *Legislature*—Wyoming State Legislature (convened Jan. 12, 1965); Senate, 25 members (13 Republicans, 12 Democrats); House of Representatives, 61 members (34 D, 27 R).
Education: *School enrollment* (1964–65)—public elementary, 55,000 pupils (2,695 teachers); public secondary, 39,000 pupils (1,380 teachers); nonpublic schools, 4,400 pupils (130 teachers); college and university (fall 1964), 9,502 students. *Public school expenditures* (1964–65)—$46,000,000 ($554 per pupil); average teacher's salary, $5,996.
Public Finance (fiscal year 1965): *Revenues*, $154,808,758 (2% sales tax, $13,547,517; motor fuel tax, $13,013,010; federal funds, $69,600,000). *Expenditures*, $141,607,354 (education, $32,141,000; health, welfare, and safety, $5,709,000; roads and highways, $67,377,000). *State debt*, $14,686,000 (June 30, 1965).
Personal Income (1964): $837,000,000; average annual income per person, $2,441.
Public Assistance (fiscal year 1965): $4,839,540 to 7,694 recipients (aged, $2,031,456; dependent children, $1,510,969).
Labor Force (employed persons, June 30, 1965): *Agricultural*, 25,100; *nonagricultural* (wage and salary earners), 125,100 (5.2% manufacturing, 17.6% trade, 21.4% government). *Unemployed persons* (June 30, 1965)—4,800.
Manufacturing (1963): Value added by manufacture, $82,978,000 (food and products, $17,204,000; petroleum and coal products, $36,824,000; stone, clay, and glass products, $9,389,000; lumber and wood products, $7,856,000; printing and publishing, $6,177,000).
Agriculture (1964): *Cash farm income*, $164,826,000 (livestock, $125,527,000; crops, $28,726,000; govt. payments, $10,573,000). *Chief crops* (tons)—sugar beets, 861,000 (ranks 9th among the states); barley, 97,000 (rank, 18th); hay, 1,574,000; wheat, 159,000; oats, 50,000; corn for grain, 32,000; potatoes, 25,500.
Mining (1964): *Production value*, $504,846,000 (ranks 12th among the states). *Chief minerals* (tons)—coal, 3,101,000 (rank, 13th); iron ore, 2,303,000 (rank, 7th); uranium, 1,490,353 (rank, 2nd); petroleum, 138,752,000 barrels (rank, 5th); natural gas, 232,787,000,000 cubic feet (rank, 7th); gold, 6 troy ounces (rank, 14th).
Fisheries (1963): *Commercial catch*, 180,000 pounds ($5,000).
Transportation: *Roads* (1964), 7,101 miles (7,462 surfaced); *motor vehicles* (1965), 243,652; *railroads* (1964), 761 miles; *aircraft* (1964), 751 (85 airports).
Communications (1965): *Telephones*, 157,500; *television stations* (1964), 3; *radio stations* (1964), 30; *newspapers* (1965), 9 (daily circulation, 55,579).

YACHTING. See Sports.

YEMEN



Serious fighting in the civil war in Yemen ended in 1965, but the political struggle continued between the Royalists and the Republicans. The latter faction attempted to end the Egyption intervention in the struggle and to move toward a compromise settlement with the Royalists

Agreement. Yemen's civil war, which began in September 1962, was still unresolved at the beginning of 1966. Serious fighting, however, ended in the late summer of 1965 under a cease-fire arranged by President Gamal Abdel Nasser of the United Arab Republic (UAR) and King Faisal of Saudi Arabia at Jiddah, Saudi Arabia, on August 24.

The cease-fire agreement included provisions for the withdrawal of 50,000 Egyptian troops from Yemen within 13 months, a conference of 50 Yemeni leaders from both sides at Haradh in Yemen, and a national plebiscite, to be held no later than Nov. 23, 1966, to determine Yemen's form of government. A coalition government, including both Royalists and Republicans but excluding Republic President Abdallah al-Sallal and Royalist Imam Muhammad al-Badr, would be formed in the interim.

Reports from the conference at Haradh, which began in November, indicated that little progress was made between the two factions because of dis-

UPI

YEMENI CEASE-FIRE AGREEMENT was signed by President Nasser of the United Arab Republic (l.) and King Faisal of Saudi Arabia (r.) on August 24, 1965.

agreement over the name of the proposed interim government. Republicans insisted upon including the word *Republic;* the Royalists demanded that it be called *The Government of the State of Yemen.*

Republicans. The Republicans experienced growing disunity during 1965. President Abdallah al-Sallal, who was in poor health and apparently lacked administrative ability, was unable to hold together the disparate Republican groups, particularly two Muslim sects, the Shafiʿites and the Zaidis.

Prime Minister Hasan al-Amri, a staunch supporter of UAR President Nasser, resigned from the cabinet in April 1965. He was replaced by Ahmad Muhammad Numan. The new prime minister formed a cabinet composed of nine Zaidis and nine Shafiʿites; only two military leaders were included. Numan set the stage for peace talks with Saudi Arabia and sent a peace mission to eight Arab capitals. In June, however, he was forced to resign because of political and constitutional differences with President al-Sallal, and al-Amri was reappointed prime minister. On August 18, Yemeni leaders met with Egyptian leaders in Cairo and accepted proposed truce terms after the Egyptian leaders promised to withdraw troops from Yemen.

Royalists. A group of princes, all relatives of Imam Muhammad al-Badr, rose to importance during 1695. Among them were Royalist Prime Minister Hasan ibn Yahya, Vice Premier Abd al-Rahman ibn Yahya, Prince Abdallah ibn Husayn, Prince Hasan ibn Husayn, and Prince Abdallah ibn Hasan.

In January 1965, Imam Muhammad al-Badr agreed to limit his authority and the royalist government proposed a constitution providing for a state council and a legislature. In April the government proclaimed a national charter which declared that the civil war would continue until the Egyptian forces withdrew from Yemen and until Yemen was allowed freely to choose its own governmental system.

Sydney Nettleton Fisher

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YEMEN · Information Highlights

Area: 75,290 square miles.
Population: 5,000,000 (mid-1964 est.).
Chief Cities (1963 est.): Sana, the capital, 100,000; Taiz, 80,000; Hodeida, 45,000.
Government: *President*—Abdallah al-Sallal (took office Oct. 31, 1962); *Prime Minister*—Hasan al-Amri (took office July 18, 1965).
Religious Faiths: Muslims, 99% of population; others, 1%.
Education: *Literacy rate*—5% of population. *Total school enrollment* (1962)—62,773 (primary, 61,353; secondary, 1,215; teacher-training, 170; technical, 35).
Finance (1964–65 budget): Budget balanced at $27,300,000; *monetary unit,* riyal (1.1 riyals equal U.S.$1).
Crops: Coffee (1964–65), 5,400 metric tons.
Minerals (metric tons, 1964): Salt, 35,000.
Foreign Trade: *Chief exports:* coffee, hides and skins; salt; qat (a narcotic shrub); *chief imports:* textiles, sugar, glass.
Transportation: *Major roads* (1960), 750 miles; *civil airline,* Yemeni Airline Co.; *principal airport,* Sana.
Communications: *Telephones* (1964): 900.

YOUNG, John W. See biographical sketch under Space Exploration.

YOUTH CORPS. See Anti-Poverty Program.

YUGOSLAVIA

The most important developments in Yugoslavia during 1965 included two political events that appeared to demonstrate increasing autonomy on the part of the Federal Assembly, conflicts between the regime and the intellectuals, closer relations with the Soviet bloc (while maintaining intensive contacts with the West), and a sweeping economic reform.

Government. In the elections held in March and April to renew all the seats in the communal and half the seats in other assemblies, there were more candidates than seats—an unusual situation in Communist countries. (Approximately two candidates ran for each seat in the communal assemblies, and 359 candidates contested 300 seats in the Federal Assembly.) The electoral procedure, however, barred declared opponents of the regime.

Intellectual Life. The bimonthly publication *Praxis,* edited by a group of young philosophy professors at the University of Zagreb, became the center of social and intellectual criticism. Launched in September 1964, *Praxis* has a national edition in Serbo-Croatian and an international edition in several languages. The "angry young professors" who edit and contribute to the magazine, while expressing a fundamental attachment to humanitarian Marxism, criticized bureaucrats of the Communist League (Yugoslavia's official political party) and remnants of Stalinism. As a result, the magazine became a target of the league's dogmatists.

A more dramatic instance of intellectual unrest was the case of Mihajlo Mihajlov, a young assistant professor on the Zadar philosophical faculty of the University of Zagreb. His travel articles *Moscow Summer 1964,* published in the January and February issues of the Serbian literary review *Delo,* was judged—after Soviet protest—to be offensive to the Soviet Union. On February 11, President Tito himself censured Mihajlov for being a "reactionary." A month later, Mihajlov was arrested and, on April 30, was sentenced to nine months' imprisonment. On June 23 the Croatian Supreme Court reduced the sentence to five months and suspended it for two years.

Meanwhile, Mihajlov was dismissed from his professorial duties and was unable to secure a passport for a lecture trip to American universities. He was assailed by a Communist League leader as being "anti-Communist, reactionary, and God-seeking." Mihajlov sued the government for violating his constitutional rights.

Foreign Relations. Tito made a series of ostentatiously friendly visits in 1965 to nations of eastern Europe, indicating closer cooperation with the other Communist-bloc countries. He visited East Germany, Czechoslovakia, and the Soviet Union on June 2–30. A joint Soviet-Yugoslav statement issued on July 1 stressed their "identity and great similarity of views" on international issues. On September

22–27, Tito made his first trip to Bulgaria in 18 years. He also received an informal visit from Hungarian Premier János Kádár in August and, on November 15–19, an official visit from the highest Polish Communist party and state officials, Władysław Gomułka and Joseph Cyrankiewicz. In addition, trade protocols between Yugoslavia and several countries of the Council for Mutual Economic Assistance (COMECON) provided for an expansion of trade relations with the Soviet bloc.

Ties with the nonaligned nations continued to be close. A conference of ambassadors from 17 nonaligned countries took place in Belgrade from March 13 to 15. The outcome of the meeting was an appeal, issued on April 1, to begin negotiations for a settlement of the war in Vietnam. Regarding individual nonaligned countries, Tito paid official visits to Algeria (April 15–22) and the United Arab Republic (April 26–30), and received visits from Tunisian President Habib Bourguiba (March 29–April 5), Indian Prime Minister Lal Bahadur Shastri (July 28–31), Guinean President Sékou Touré (August 2–4), and UAR President Gamal Abdel Nasser (September 1–5).

Tito also cultivated relations with western Europe. He paid an official visit to Norway on May 10–14, and was visited by Michael Stewart, the British foreign minister, on April 18–22. In June and July, several meetings were held to promote closer economic and technical cooperation with Britain, Italy, Austria, and Greece. But the decision of the European Economic Community (Common Market) to introduce protective tariffs on imports of fruit and vegetables from countries outside the Common Market was a blow to Yugoslavia's exports.

Yugoslav-American relations were hurt by consistent Yugoslav criticism of United States policies in Vietnam. These attacks reached their climax in Tito's Victory Day speech (May 10), in which he implicitly compared current United States policy to that of Hitler and Mussolini.

On March 16, an agreement was signed in Belgrade by which the United States sold Yugoslavia 700,000 tons of wheat worth $53.4 million, to be repaid in dollars over a period of 12 years. On December 14 the U.S. government granted Yugoslavia a credit of $57 million for the purchase of machinery in the United States. U.S. economic aid to Yugoslavia in 1965 totaled $175 million.

CAMERA PRESS—PIX

YUGOSLAV PRESIDENT TITO (l.) arrives in Czechoslovakia on June 2, 1965, for talks with President Novotny (r.). Mrs. Novotny (in light hat) greets Mrs. Tito (carrying flowers).

Economy. On July 24 the Federal Assembly inaugurated a general economic reform. The reform meant to spur economic activity and to eliminate weaknesses inherited from the past, such as price disparities in both domestic and foreign trade, subsidies to unproductive enterprises, an inadequate system of income distribution, and inequitable methods of taxation. The reform included a devaluation of the dinar and a 24% increase in the general price level. There also were tax reductions for industrial enterprises and incentives for agriculture. According to official estimates, these and similar measures (which Tito called the "necessary surgical cut" into the Yugoslav economy) would need two to three years to bear fruit.

In spite of the reform, the country went through a serious economic crisis during the second half of

YUGOSLAVIA · Information Highlights

EUROPE
ASIA
AFRICA

Area: 98,766 square miles.
Population: 19,511,000 (June 30, 1965, est.).
Chief Cities (1961 census): Belgrade, the capital, 585,234; Zagreb, 430,802; Skopje, 165,529; Sarajevo, 143,117.
Government: *President*—Marshal Josip Broz Tito (elected 1953; reelected for life, 1963). *Vice President*—Aleksandar Ranković (elected 1963). *Parliament*—Federal Assembly, 670 members.
Religious Faiths: Serbian Orthodox Catholics, 41% of population; Roman Catholics, 32%; Muslims, 12%.
Education: *Literacy rate* (1961)—80% of population aged 10 and over. *Total school enrollment* (1961)—3,453,916 (primary, 2,895,694; secondary, 94,651; teacher-training, 30,335; technical, 275,226; higher, 158,010).
Finance (1964 est.): *Revenues,* $1,533,000,000; *expenditures,* $1,414,000,000; *monetary unit,* dinar (1,250 dinars equal U.S.$1 as of July 1965).
Net Material Product (1964): $6,960,000,000.
Economic Indexes (1964): *Industrial production,* 198 (1958=100); *agricultural production,* 152 (1956–57=100); *cost of living,* 157 (1958=100).
Manufacturing (metric tons, 1964): Cement, 3,039,000; wheat flour, 2,016,000; crude steel, 1,677,000; wine, 585,000; meat (1963), 499,000; sugar, 349,000; gasoline, 344,000.
Crops (metric tons, 1964): Maize, 6,960,000 (ranks 4th among world producers); wheat, 3,704,000 (rank, 14th); sugar beets, 2,830,000 (rank, 16th); potatoes, 2,820,000 (rank, 14th); grapes, 1,250,000 (rank, 9th); rye, 175,000 (rank, 16th); wool, greasy (1963), 12,700 (rank, 17th); barley, 534,000.
Minerals (metric tons, 1964): Bauxite, 1,293,000 (ranks 10th among world producers); lead, 101,594 (rank, 7th); zinc, 66,070 (rank, 16th); copper, 63,164 (rank, 11th); silver, 4,036,879 troy ounces (rank, 11th); gold, 93,687 troy ounces (rank, 19th); iron ore, 2,307,000.
Foreign Trade (1964): *Exports,* $893,100,000 (chief exports, 1963: meat, $27,000,000; ships and boats, $22,000,000; lumber, $16,500,000; iron and steel, $13,000,000); *imports,* $1,323,000,000 (chief imports, 1963: wheat and maslin, unmilled, $43,000,000; iron and steel, $35,000,000; raw cotton, $18,000,000). *Chief trading partners* (1963): Italy (took 20% of exports, supplied 11% of imports); U.S. (took 6% of exports, supplied 18% of imports); West Germany (took 10% of exports, supplied 9% of imports).
Transportation: *Roads* (1964), 51,716 miles (6,338 paved); *motor vehicles* (1964), 158,989 (automobiles, 110,491); *railways* (1963), 7,368 miles; *merchant vessels* (1964), 168 (890,000 gross registered tons); *national airline,* Jugoslovenski Aero Transport; *principal airports,* Belgrade, Dubrovnik, Ljubljana, Sarajevo, Skopje, Titograd, Zagreb.
Communications: *Telephones* (1964), 330,400; *television stations* (1964), 15; *television sets* (1964), 245,000; *radios* (1963), 2,280,000; *newspapers* (1962), 19 (daily circulation, 1,424,000).

1965. In July, unemployment soared to 450,000. By the middle of September, prices had risen 51%, rather than 24% as forecast in the plan. Also, the rate of increase in industrial production was 7%, instead of the planned 11%, and agricultural production lagged seriously. Although the foreign trade balance improved, exports were still considerably smaller than imports, and $289 million of the foreign debt was due before the end of the year.

MILORAD M. DRACHKOVITCH
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YUKON TERRITORY

The Canadian government's plans for a vast road-building program in the Yukon and Northwest Territories, announced in 1965, promises a new era of development for the Yukon.

Roads. The Canadian Department of Northern Affairs will invest an average of $10 million a year over the next 10 years for new roads in the Yukon and Northwest Territories. This will be the first phase of a 20-year highway program to bring all areas with exploitable resources within 200 miles of a year-around road. These highways will link existing communities, thereby reducing the Yukon's dependence on other forms of transportation. They will benefit the Yukon's economy by lowering the cost of living, reducing the need for large supply inventories, and increasing tourism.

Scheduled for completion in 1966 was a 220-mile road running north and west from Watson Lake to Ross River on the Canol Road. It will provide an alternate route through the southern Yukon and may be instrumental in bringing the area's marginal mining properties into production.

Economy. Cassiar Asbestos Corporation began work on its Clinton Creek property, northwest of Dawson, and expects to begin production of asbestos by 1967. Discovery Mine, a gold property lying 40 miles west of Carmacks, started production in 1965.

Income from tourism in the Yukon in the 1964–65 season increased 16% over the previous season, to an estimated volume of $5 million.

Mount Kennedy. Early in 1965 the Canadian government announced that a mountain in the Yukon's St. Elias Range would be named in honor of the late U.S. President John F. Kennedy. In March, Senator Robert Kennedy and members of the National Geographic Society and the Boston Museum of Science made the first ascent of the 13,905-foot peak. (See GEOGRAPHY AND EXPLORATION.)

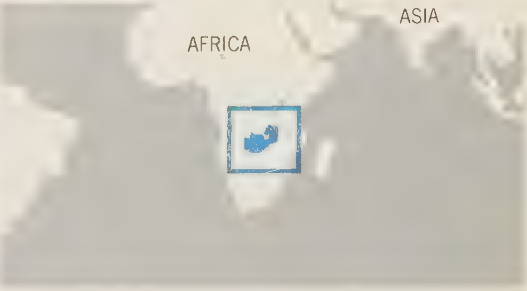
Visitors. A group of Russian scientists toured the Yukon in August to study permafrost conditions. The visit followed a tour of Siberia by Minister of Northern Affairs Arthur Laing and his party.

G.R. CAMERON
Commissioner, Yukon Territory

YUKON TERRITORY · Information Highlights

Area: 207,076 square miles.
Population: 15,000 (Oct. 1, 1965, est.).
Chief City (1961 census): Whitehorse, the capital, 5,031.
Government: *Chief Officers*—Commissioner, Gordon R. Cameron; exec. asst. to commis., D.A.W. Judd; terr. secy., H.J. Taylor; terr. treas., Kenneth MacKenzie; supt. of schools, Harry Thompson; chief justice, Henry I. Bird of B.C. Court of Appeals. *Legislature*—Territorial Council, 7 members.
Education: *School enrollment* (1964–65)—elementary and secondary, 3,200 pupils (150 teachers); Indian, 125 (5); vocational, 104 (14). *School expenditures*, $1,605,659.
Public Finance (1964–65): *Revenues*, $8,800,940 (including $969,196 from territorial taxes). *Expenditures*, $8,327,972 (including $1,605,659 for education).
Public Assistance (fiscal year 1962): $165,000 (aged, $63,000; dependents and unemployed, $102,000).
Mining (1964 est.): *Production value*, $15,210,744. *Chief minerals* (tons)—lead, 9,463 (ranks 4th among the provinces and territories); zinc, 7,146 (rank, 8th); coal, 6,792 (rank, 6th); silver, 5,584,497 troy ounces (rank, 2nd); gold, 57,075 troy ounces (rank, 5th).
Transportation (1965): *Motor vehicles*, 6,710; *railroads*, 58 miles; *airlines*, 2 (3 airports).
Communications (1965): *Telephones*, 2,700; *television stations*, 1; *radio stations*, 1; *newspapers*, 2.

ZAMBIA



Zambia was one of the countries most immediately affected by Rhodesia's declaration of independence from Britain on Nov. 11, 1965. Because Zambia depends on Rhodesia for its rail outlet to the sea and for oil imports, the economic sanctions imposed on Rhodesia by Great Britain, the United States, and most African countries threatened Zambia's economic well-being.

State of Emergency. Zambia's President Kenneth Kaunda ordered a state of emergency in Zambia on November 11 when the white-controlled government of Rhodesia declared its independence. Noting reports of a buildup of Rhodesian troops along the Zambezi River separating his country from Rhodesia, President Kaunda said he would meet force with force, and he sped Zambian troops to patrol the border. He also called for British support to help protect the Kariba Dam hydroelectric complex, which straddles the Rhodesian-Zambian border. Britain, however, did not send troops to protect the dam.

Economic Plight. Zambia's economic well-being is linked with that of Rhodesia. Copper mined in

ZAMBIA · Information Highlights

Area: 288,129 square miles.
Population: 3,710,000 (June 30, 1965, est.).
Chief Cities (1964 est.): Lusaka, the capital, 122,300; Kitwe, 123,200.
Government: *President*—Kenneth Kaunda (took office Oct. 24, 1964). *Parliament*—Legislative Assembly, 75 members; party seating (1965): United National Independence party, 55; African National Congress, 10; National Progress party, 10.
Education: *Total school enrollment* (1964)—401,779 (primary, 385,267; secondary, 13,853; teacher-training, 1,463; technical-vocational, 1,196).
Finance (1964–65 est.): *Revenues*, $157,000,000; *expenditures*, $127,000,000; *public debt* (1964), $274,000,000; *monetary unit*, pound (0.3571 pound equals U.S.$1).
Gross National Product (1964): $601,000,000.
Economic Indexes (1964): *Industrial production*, 115 (1961=100); *cost of living*, 108 (1958=100).
Manufacturing: Cement (1964), 170,000 metric tons; meat (1962), 16,000 metric tons; lumber (1963), 45,000 cubic meters.
Crops (metric tons): Maize (1962–63 crop year), 86,000; peanuts (1964–65 crop year est.), 50,000.
Minerals (metric tons, 1964): Copper, 672,989 (ranks 3rd among world producers); zinc, 46,712 (world rank, 18th); manganese, 38,010; lead, 13,161; cobalt, 1,408; silver, 977,978 troy ounces; gold, 5,033 troy ounces.
Foreign Trade (1964): *Exports*, $470,000,000; *imports*, $247,000,000.
Transportation: *Roads* (1964), 21,217 miles (817 paved); *motor vehicles* (1964), 51,065 (automobiles, 39,491); *airline*, Central African Airways; *principal airport*, Lusaka.
Communications: *Telephones* (1964): 29,001; *television stations* (1964), 1; *television sets* (1964), 9,750; *newspaper* (1963), 1.

WELCOME
TO
ZAMBIA
THE FRIENDLY COUNTRY
08

ZAMBIA, fearful that Rhodesia might destroy the strategic Kariba Dam after it declared its independence on November 11, called on the British to send troops to protect the dam. Britain sent a token support force, including these RAF personnel unloading a Firestreak rocket at Lusaka, the capital of Zambia.

WIDE WORLD

Zambia is normally carried by rail across Rhodesia to South Africa and the sea. This vital rail link might be cut off in retaliation if Zambia should aid the British-imposed economic sanctions against Rhodesia or if Rhodesian African nationalists who are refugees in Zambia should take military action against Rhodesia. Nor was it certain by the end of the year whether Zambia's copper could be shipped by an alternate route through Mozambique to the Indian Ocean.

Zambia also depended on Rhodesia for most of its oil, which it uses in copper mining and other vital industries. In December, after Britain instituted an oil embargo against Rhodesia, Britain and the United States began to transport oil into Zambia by air.

Rail Link with Tanzania. Controversy arose in 1965 over the surveying and financing of another proposed alternative route to the sea—the projected 1,320-mile railroad link between the copper belt in Zambia and Dar es Salaam, capital of Tanzania and a major Indian Ocean port. The project has been variously estimated to cost between $2 million and $4.5 million. The planned railroad would permit landlocked Zambia to ship its vital copper to world markets across African-controlled land, bypassing white-dominated areas. The proposed railroad would also open up Zambia's northeastern area and provide jobs for Zambia's unemployed workers.

President Kaunda urged speed in surveying the route and financing the railroad. A Chinese Communist team of experts reportedly surveyed Tanzania's part of the project in June, and President Julius K. Nyerere of Tanzania later confirmed that Communist China had offered to finance the railroad. But it was announced in September that a British-Canadian team would survey the entire route and that Western countries probably would help finance the project.

Copper Agreements. After attaining independence from Britain on Oct. 24, 1964, Zambia negotiated with the British South Africa Company on the amount of royalties to be paid for its copper. At the conclusion of negotiations on May 7, 1965, the company agreed to withdraw from Zambia and to sell its extensive real estate holdings to the government.

Copper price differences with Chile, with which Zambia competes as the world's second largest copper producer, were resolved in 1965. Chile's representative, Javier Larrigue, visited Lusaka in June, and two representatives from Zambia conferred with Chilean officials in Santiago in October. Agreements reached in mid-October stabilized the price of copper at $.38 per pound.

Lumpa Sect Ban Extended. The government's ban on the Lumpa religious sect, which had revolted in 1964, was extended for six months on April 21, 1965. The sect's leader and "prophetess," Alice Lenshina, had been granted protection on a government reservation on March 22 for herself and her followers.

Budget. Finance Minister Arthur Wina's proposed budget for fiscal year 1966, announced on July 15, 1965, projected government revenues at $235 million and a budget surplus of $47 million. The surplus would enable Zambia to finance its own development program and to increase its foreign exchange reserves in 1966.

FRANKLIN PARKER
Professor of Education
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ZANZIBAR. See TANZANIA.

ZINC. See MINING—*Mineral Production.*

KARIBA DAM, on the Zambezi River between Zambia and Rhodesia, supplies nearly 90% of Zambia's electric power.

UPI

ZOOLOGY

Among the many important advances in zoology in 1965 were findings on echo-location in fish-catching bats, heat regulation in newborn seals, natural control of sexual maturity in locusts, and annelid neurochemical characteristics in an onychophoran.

Fish-catching bats. Certain species of bats are known to catch small fish by dragging their feet through the water as they fly low over the surface. The prey are gaffed on long, forward-pointing claws and then transferred to the mouth. Fish-catching bats emit pulses of sound similar to those of bats that detect and capture insects by echo-location. It has seemed unlikely that they could detect submerged fish by echo-location, however, because sound is transferred from air to water so inefficiently. Recently, evidence has been produced that explains how the fishing bat, *Noctilio leporinis,* locates its prey.

Pieces of fish muscle or air-filled balloons were placed a few millimeters below the surface of a pool. These submerged objects were caught no more frequently than would be expected by chance, and the bats did not respond to fish sounds reproduced below the surface of the pool. However, pieces of fish that projected slightly above the surface of the water were readily caught. Also, small surface disturbances produced by artificial upwellings of water consistently caused a dipping response by the bats. Sensitivity to surface disturbances was revealed by training bats to recognize short lengths of fine wire marking the positions of submerged fish. Thus a randomly placed wire 0.21 millimeters in diameter extending only 1 millimeter vertically out of the water was discovered by hungry bats more often than they could have found it by chance. This was accomplished entirely by echo-location; neither visual nor olfactory senses were necessary.

Heat Regulation in Newborn Seals. The Greenland seal *Histriophoca groenlandica* is born on ice floes during the cold season and remains in the air unprotected from the elements for the first month to six weeks of its life. Recent studies reveal that this seal is born with a well-developed hairy coat which provides good heat insulation in air, but that it has almost no subcutaneous fat such as is found in the adult.

During its early life the animal is able to maintain constant body temperatures in extreme cold by intense chemical heat regulation (heat generated by cellular, biochemical processes) that is reflected in an unusually high metabolic rate. However, as the animal grows older physical heat regulation replaces chemical heat regulation, fat insulation develops, and changes in circulation take place. During the first 40 days after birth the seal loses its hairy coat, and in the first 20 to 25 days its weight increases five to seven times as great amounts of subcutaneous fat are laid down. The fat is a better insulator than hair for an aquatic mode of life. As the fat layer builds up, less heat is transferred by the circulatory system to the peripheral tissues. Skin temperature approaches the temperature of the environment, and because of the reduced thermal gradient loss of heat to the environment is further reduced. The breathing of older seals is slower and more shallow than that of newborn seals, and this also saves body heat.

Reproduction in Locusts. The time required for the African locust *Schistocerca gregaria* to become reproductively mature varies greatly. Under favorable conditions egg-laying may take place in less than four weeks following moult to the adult or fledging stage. On the other hand, eggs may not be laid until more than nine months after fledging, and during this period the adult insects retain the immature color and the ovaries remain relatively inactive.

Schistocerca spends a large part of its life in arid regions where the vegetation is green only for brief periods. During the dry season, when the locusts feed on withered and yellow vegetation, they do not breed. It has been demonstrated experimentally that young locusts fed old vegetation change to the mature color more slowly and start egg laying several weeks later than those fed green vegetation. Senescent leaves are deficient in plant growth-regulating gibberellins, and senescence in leaves can be retarded by gibberellin A_3. When the diet of senescent leaves was supplemented with gibberellin A_3, the locusts matured at the same rate as those fed green leaves.

These studies suggest that deficient diets during the dry season delay sexual maturity. Following the onset of rains, green vegetation furnishes the dietary essentials that permit sexual maturation and subsequent breeding. Thus, breeding is geared to the rains, assuring the young a favorable environment for development and growth.

Annelid Characteristics in an Onychophoran. The onychophorans are slug-like animals with many legs. They are usually found in damp humid situations in restricted tropical areas south of the Tropic of Cancer. This group of animals has morphological similarities to two phyla, the Annelida, which includes earthworms and leeches, and the Arthropoda, which includes crabs, spiders, and insects. Yet the onychophorans are considered to be more like arthropods than annelids, and they are commonly placed by authorities in the class Onychophora of the phylum Arthropoda. On the other hand, the classification of this group is still debated, for other authorities place it in a phylum of its own, the Onychophora.

The Chilean onychophoran *Opisthopatus costesi* has been shown to have neurochemical patterns resembling those of the annelids. In this animal, motor neurons (nerve cells that cause glands to secrete, capillaries to constrict, or muscles to contract) are cholinergic. This means that the motor neuron elaborates the chemical acetylcholine at its distal end so that adjacent muscle tissue contracts.

Associated with cholinergic motor neurons is cholinoceptive muscle that contracts because of acetylcholine. Such muscle has high concentrations of the enzyme cholinesterase, and its response to acetylcholine is strengthened by the drug eserine. All these cholinergic characteristics of *Opisthopatus* are unknown in the arthropods (onychophorans excluded) and are generally present in the annelids.

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NECROLOGY · 1965

Following is a selected list of more than four hundred prominent persons who died in 1965. Separate biographical articles on those persons whose names are preceded by an asterisk (*) may be found under their own headings within the main text.

Abdullah al-Salem al-Sabah (70), amir of Kuwait: b. Kuwait, Arabia, 1895; d. Kuwait, Nov. 24, 1965. One of the richest men in the world, Sheikh Abdullah used much of his wealth, derived from oil royalties, to modernize his country. He also introduced a form of representative government to Kuwait, obtained its complete independence from Britain in 1961, and involved it more deeply in Middle Eastern affairs. The son of Sheikh Salem al-Mubarak al-Sabah, Abdullah became ruler in 1950.

Albarda, Horatius (61), Dutch financier; was official of KLM Royal Dutch Airlines from 1946, and president since 1963: d. in plane crash in Switzerland (reported) May 17

Ammann, Othmar Hermann (86), U.S. bridge designer and engineer: b. Schaffhausen, Switzerland, March 26, 1879; d. New York, N.Y., Sept. 22, 1965. He designed some of the world's most notable bridges, mainly in the New York metropolitan area, including the George Washington Bridge (opened in 1931) and the Verrazano-Narrows Bridge (opened in 1964), which has the longest center suspension span in the world. A graduate of the Swiss Federal Institute of Technology, he went to the U.S. in 1904 and worked with bridge builder Gustav Lindenthal from 1912 until 1923, when he established his own firm. During the 1930's, he was chief engineer and director of engineering of the Port of New York Authority and chief engineer of the Triborough Bridge and Tunnel Authority. He directed the design and construction of such projects as the Lincoln Tunnel, the Goethals Bridge, and the Outerbridge Crossing. In 1939 he returned to private practice, and after 1946 he was senior partner in the firm of Ammann and Whitney.

Anastassy (Gribanovsky) (91), metropolitan of Russian Orthodox Church Outside of Russia (1936–64): d. New York, N.Y., May 22

Anderson, Maj. Gen. Orvil (70), U.S. Army officer; was a pioneer in high-altitude balloon flights; held altitude record from 1935 to 1951: d. Montgomery, Ala., Aug. 23

Andrea, Frank (77), U.S. manufacturer; was president and chairman of Andrea Radio Corporation from 1934; pioneered in precision-built radios: d. Manhasset, N.Y., Dec. 22

Anthony, Katharine (87), U.S. author; wrote biographies of Queen Elizabeth I and other famous women; campaigned for women's suffrage in 1917: d. New York, N.Y., Nov. 20

Appleton, Sir Edward Victor (72), British scientist; won 1947 Nobel Prize for physics for his discovery of upper atmosphere layers that reflect radio waves: d. Edinburgh, Scotland, April 21

Artzybasheff, Boris (66), Russian-born U.S. illustrator and caricaturist; noted for his drawings of grotesque humanized machines: d. Lyme, Conn., July 16

Audiberti, Jacques (66), French playwright, poet, and novelist; won 1964 Grand Prix National des Lettres; best-known play *Le mal court:* d. Paris, France, July 10

Avery, Milton Clark (71), U.S. painter; was a pioneer of abstract art: d. New York, N.Y., Jan. 3

Bailey, Cleveland M. (78), U.S. public official; was U.S. congressman (Democratic) from West Virginia from 1947 to 1962: d. Charleston, W. Va., July 13

Balokovic, Zlatko (70), Yugoslav violinist; appeared in concerts throughout Europe; owned collection of violins, including the legendary King Joseph: d. Venice, Italy, March 29

Barbour, Dave (53), U.S. musician; popular guitarist; was composer of *Manana* and *It's a Good Day,* with singer Peggy Lee, his former wife: d. Hollywood, Calif., Dec. 11

Barker, Shirley (54), U.S. author; was historical novelist and poet; her writings include *Peace, My Daughters* and *Rivers Parting:* d. Penacook, N.H., Nov. 18

***Baruch, Bernard M.** (94), U.S. financier and philanthropist: d. New York, N.Y., June 20

Batt, William L., Sr. (79), U.S. industrialist; was deputy director of War Production Board in World War II; chief of Marshall Plan mission to Great Britain (1950–52); president of SKF Industries, Inc. 1923–50: d. Delray Beach, Fla., Feb. 10

Beatty, Clyde (61), U.S. wild-animal trainer; was performer in vaudeville and circuses: d. Ventura, Calif., July 19

Beemer, Brace (62), U.S. radio personality; was star of *The Lone Ranger* radio program, 1941–54: d. Oxford, Mich., March 1

Beer, Max (79), Austrian-born newspaper correspondent and author; was veteran reporter at League of Nations and United Nations: d. New York, N.Y., Oct. 27

Begley, Frank M. (53), U.S. administration officer to UN on Cyprus from July 1964; developed UN security force and headed it for 18 years: d. Nicosia, Cyprus, Jan. 26

Bennett, Constance (59), U.S. actress: b. New York, N.Y., Oct. 22, 1905; d. Fort Dix, N.J., July 24, 1965. Noted for her sophisticated glamour, she was one of the most popular film stars of the 1920's and 1930's. The daughter of the stage actor Richard Bennett, she was discovered at the age of 16 by film producer Samuel Goldwyn and appeared in her first motion picture, *Cytherea,* in 1924. Her films include *Code of the West* (1925), *The Goose Hangs High* (1925), *Sally, Irene and Mary* (1925), *Bed of Roses* (1933), *Our Betters* (1933), *The Affairs of Cellini* (1934), *Madame Spy* (1934), *Topper* (1937), and *Tailspin* (1939). She also starred in her own production, *Paris Underground* (1945). She made her stage debut in *Easy Virtue* (1940).

Bevilacqua, Giulio (84), Italian cardinal; was named prince of the Roman Catholic Church in February 1965; former teacher of Pope Paul VI: d. Brescia, Italy, May 6

Binkley, Wilfred Ellsworth (82), U.S. historian; published studies of presidential power and American political parties; his books include *The Power of the President* (1937) and *The Man in the White House* (1959): d. Ada, Ohio, Dec. 8

Blackmur, Richard P. (61), U.S. literary critic and poet: b. Springfield, Mass., Jan. 21, 1904; d. Princeton, N.J., Feb. 2, 1965. Although he never received a formal college education, he became known as one of the most original and penetrating American critics and as a poet of some note. He began his career as a freelance poet and critic in the 1920's and contributed widely to literary journals. A member of the Princeton University faculty from 1940, he

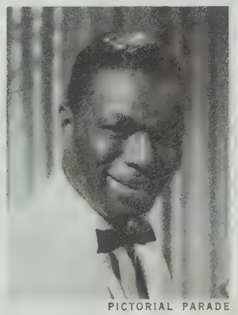
Clara Bow

PICTORIAL PARADE

Martin Buber

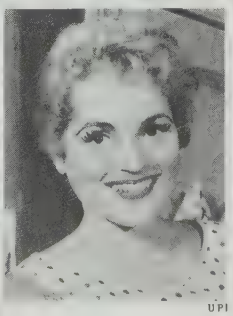
UPI

Nat King Cole



PICTORIAL PARADE

Judy Holliday



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Lord Ismay

WIDE WORLD

played an important role in the development of the university's creative writing program. His critical volumes, covering a wide range, but stressing 19th and 20th century poetry and fiction, include *The Double Agent* (1935), *The Expense of Greatness* (1940), *Language as Gesture* (1952), and *The Lion and the Honeycomb* (1955). Among his volumes of verse are *From Jordan's Delight* (1937) and *The Good European* (1947).

Blackstone, Harry (80), U.S. magician: b. Chicago, Ill., Sept. 27, 1885; d. Hollywood, Calif., Nov. 16, 1965. Considered to be one of the last great classical magicians, he specialized in illusionist and sleight-of-hand tricks, seldom using mirrors, wires, or other devices. Born Harry Boughton, Blackstone became interested in magic at an early age. He began his stage career in 1904 as part of a team, with his brother Peter, billed the Bouton Brothers. Harry later changed his stage name to Frederick the Great and then to Blackstone the Great. He retired in 1959.

Blair, Floyd G. (74), U.S. financier; president of American-Australian Association in New York; was president of the New York Philharmonic Symphony Society from 1950 to 1956: d. Melbourne, Australia, Oct. 28

Bliss, Maj. Gen. Raymond W. (77), U.S. Army officer; was surgeon general from 1947 to 1951, and in charge of Army Medical Corps in Korean War (1950–51): d. Tucson, Ariz., Dec. 12

Blossom, Virgil Tracy (58?), U.S. educator: b. Brookfield, Mo., 1906 (?); d. San Antonio, Texas, Jan. 15, 1965. As superintendent of schools of Little Rock, Ark., he formulated the 1957 "Blossom Plan" for integrating the city's public schools in accordance with the 1954 U.S. Supreme Court decision. His plan was vigorously opposed by segregationist forces and by Gov. Orval E. Faubus, who ordered the National Guard to prevent Negroes from entering the city's Central High School in 1957. Although integration was achieved that year through intervention of the federal government, Blossom was dismissed from his post in 1958. After his dismissal he was appointed superintendent of the Northeast Independent School District in San Antonio, Texas. He described his ordeal in the Little Rock integration struggle in the book *It Has Happened Here* (1959).

Bol, Cornelis (80), Dutch inventor; invented and perfected the mercury vapor lamp in 1939: d. Palo Alto, Calif., July 30

Boland, Mary (83), U.S. actress; starred in stage plays and motion pictures; notable film roles were in *Ruggles of Red Gap,* and *The Women:* d. New York, N.Y., June 23

Bonner, Herbert C. (74), U.S. congressman from North Carolina (Democratic) since 1940; chairman of Merchant Marine and Fisheries Committee from 1955: d. Washington, D.C., Nov. 7

Bossom, Lord Alfred (83), British architect; designer and renovator of New York buildings; served as member of the House of Commons (1931–59): d. London, England, Sept. 4

Bow, Clara (60), U.S. film actress: b. Brooklyn, N.Y., 1905; d. Los Angeles, Calif., Sept. 27, 1965. As the silent screen's "It" girl of the flapper era, she was one of the top box office attractions of the late 1920's, noted more for her physical charms than for her acting talent. A beauty contest winner at the age of 17, she had her first starring role in *Down to the Sea in Ships* (1925), and later appeared in such films as *The Plastic Age* (1925), *Dancing Mothers* (1926), *Kid Boots* (1926), *Mantrap* (1926), *It* (1927), *Rough House Rosie* (1927), *Wings* (1927), *The Fleet's In* (1928), and *Ladies of the Mob* (1928). In 1931 she married Rex Bell, a "western" star who became a political figure in Nevada in the 1950's.

Breen, Joseph I. (75), U.S. motion picture industry administrator; was director of Production Code Administration of the Motion Picture Association of America from 1943 until retirement in 1954: d. Hollywood, Calif., Dec. 5

Broadhurst, Lt. Gen. Edwin B. (49), U.S. Air Force officer; from 1963, was chief of staff of the UN command and of U.S. forces in Korea: d. Seoul, Korea, April 4

Brokenshire, Norman Ernest (66), U.S. radio announcer: b. Murcheson, Ont., June 5, 1898; d. Hauppauge, L.I., N.Y., May 4, 1965. The first radio announcer to be identified by name on the air, he became known for his informal manner and talent for ad-libbing. He covered such events as the 1924 Democratic national convention, the 1925 presidential inauguration, and the New York reception for Charles A. Lindbergh in 1927. In 1932 he was named "King of the Announcers."

Brooks, Louise Cromwell (75), U.S. socialite; was first wife of Gen. Douglas MacArthur: d. Washington, D.C., May 30

Brophy, John (65), English author: was noted for novels based on his experiences in World War I; was father of novelist Brigid Brophy: d. London, England, Nov. 13

Brown, Clarence J. (72), U.S. congressman from Ohio (Republican) since 1938: d. Washington, D.C., Aug. 23

Brown, David (65), U.S. naval architect; was honorary chairman of board of managers of American Bureau of Shipping; chairman, 1957–64: d. East Orange, N.J., April 30

Browne, Irene (69), English actress; appeared in American motion pictures: d. London, England, July 24

Browning, Lt. Gen. Sir Frederick (68), British army officer; was authority on airborne troop movements; appointed treasurer of household of Queen Elizabeth II in 1952; husband of novelist Daphne du Maurier: d. London, England, March 14

Buber, Martin (87), Jewish philosopher: b. Vienna, Austria, Feb. 8, 1878; d. Jerusalem, Israel, June 13, 1965. One of the foremost thinkers of the 20th century, he exercised a profound influence on modern thought, including Christian theology. Influenced by German idealism, the metaphysical Hasidic sect of Judaism, and the Zionism of Theodor Herzl, he developed a personalist "I-Thou" philosophy, which emphasizes an intimate relationship between man and God, and between individual men. He served as professor at the University of Frankfurt from 1923 to 1933, and at the Hebrew University in Jerusalem from 1938 until his retirement in 1951. His numerous works include a standard German translation of the Old Testament (with Franz Rosenzweig) and the books *Pointing the Way* (1957), *I and Thou* (1958), and *The Meaning and Origins of Hasidism* (1960). One of the most respected men of his time, he was, however, the subject of occasional controversy because of his rejection of some of the rituals of Orthodox Judaism.

Bucher, Walter H. (76), U.S. geologist; professor emeritus of geology, Columbia University; wrote *The Deformation of the Earth's Crust* (1933); d. Houston, Texas, Feb. 17

Buck, C. Douglass (74), U.S. public official; was twice elected Republican governor of Delaware (1928–36); U.S. senator (1942–48): d. New Castle, Del., Jan. 28

Bulkley, Robert J. (84), U.S. public official; was U.S. congressman (Democratic) from Ohio (1911–15), and senator (1930–39): d. Cleveland, Ohio, July 21

Bunce, Alan (60?), U.S. actor; starred in radio and television in the 1950's; appeared in plays, *Sunrise in Campobello* (1960) and *Mary, Mary* (1964): d. New York, N.Y., April 27

Burdick, Eugene (46), U.S. author: b. Sheldon, Iowa, Dec. 12, 1918; d. San Diego, Calif., July 26, 1965. He was best known for the book *The Ugly American* (1958), a fictionalized indictment of the U.S. Foreign Service, which he wrote with William J. Lederer, and for *Fail-Safe* (1962), a novel about an accidental nuclear conflict, which he wrote with Harvey Wheeler. A Stanford University graduate and a Rhodes Scholar, Burdick joined the political science faculty of the University of California in 1952. His other books, also dealing with political themes, are *The Ninth Wave* (1956), *The 480* (1964), and *Nina's Book* (1965).

Burgess, Thornton Waldo (91), U.S. author of children's books: b. Sandwich, Mass., Jan. 14, 1874; d. Hampden, Mass., June 5, 1965. He was best known for his popular "Peter Rabbit" stories, which delighted millions of children and adults. Originally composed as bedtime stories for his own son, the Peter Rabbit tales convey gentle moral lessons and accurately depict nature. They were first published in book form as *Old Mother West Wind* (1910). Burgess began his literary career with the Phelps Publishing Co. as a writer and copy editor for *Good Housekeeping* magazine. Until his retirement in 1960, he wrote some 15,000 stories that appeared in daily syndicated newspaper columns and in 70 books that sold some 7,500,000 copies. A naturalist and conservationist, he lectured widely about nature. His autobiography, *Now I Remember,* appeared in 1960.

Burnstine, David (65), U.S. bridge expert; was member of *Four Aces* championship team in 1930's: d. Los Angeles, Calif., Aug. 26.

Burroughs, Alan (67), U.S. author; pioneered in analysis of paintings by X-ray; lectured on fine arts at Harvard University (1932–42); research fellow at Fogg Art Museum (1936–47); d. Little Compton, R.I., May 2

Caesar, Orville S. (73), U.S. transportation official; was president (1946–55) and chairman (1955–59) of Greyhound Corporation: d. Elgin, Ill., May 19

Campa, Miguel Angel (83), Cuban diplomat; was Cuban ambassador to the U.S. (1955–58): d. Miami, Fla., Aug. 20

Cardon, Philip Vincent (76), U.S. agronomist; was chief agronomist for the Department of Agriculture (1935–39) and director of UN Food and Agriculture Organization (1954 to 1956): d. Salt Lake City, Utah, Oct. 13

Carnahan, Paul H. (61), U.S. industrialist; was 1965 winner of Horatio Alger Award; president of National Steel Corporation since 1961: d. Grosse Ile, Mich., Dec. 26

Carroll, Nancy (60), U.S. actress; appeared in stage plays, *The Passing Show* (1923) and *For Heavens Sake, Mother* (1948), and in many films: d. New York, N.Y., Aug. 6

Case, Charles (71), U.S businessman; retired official of Eastman Kodak Company; developed microfilm process used in "V" mail during World War II: d. Avon, N.Y., Sept. 7

Case, James Herbert, Jr. (58); U.S. educator; was president of Washington and Jefferson College, 1950–59: d. New York, N.Y., July 11

Chapelle, Dickie (47); U.S. newspaper correspondent, photographer, and parachutist: d. Danang, South Vietnam, Nov. 4

Chaplin, Sydney (80), Anglo-American actor; half-brother of actor Charles Chaplin: d. Nice, France, April 15

Chase, Joseph Cummings (86), U.S. artist and teacher; was official artist for American Expeditionary Forces in World War I; painted portraits of five presidents including the two Roosevelts: d. Milwaukee, Wis., Jan. 15

Chen, Cheng (67), Nationalist Chinese government official; was premier (1950–54; 1957–60) and vice president (from 1960): d. Taipai, Taiwan, March 5

Cherry, Francis A. (56), U.S. public official; was governor of Arkansas (Democratic), 1952–54; chairman of Subversive Activities Control Board since 1963: d. Washington, D.C., July 15

Chester, Colby M. (88), U.S. industrialist; was president (1924–35) and chairman of the board (1935–43) of Postum and General Foods Corporation: d. Greenwich, Conn., Sept. 26

Chu Shi-ming (63), Chinese Nationalist army general; aide to Chiang Kai-shek (1945–47); was a signer of Japanese surrender document in 1945: d. Tokyo, Japan, Oct. 26

***Churchill, Sir Winston** (90), British statesman: d. London, England, Jan. 24

Chuter-Ede, Lord James (83), British government official; was home secretary in Labour government from 1945 to 1951: d. Surrey, England, Nov. 11

Colby, Charles C. (80), U.S. geographer; taught at University of Chicago from 1916 to 1949: d. La Crosse, Wis., July 16

Cole, Nat King (45), U.S. jazz musician: b. Montgomery, Ala., Mar. 17, 1919; d. Santa Monica, Calif., Feb. 15, 1965. Noted for the easy, relaxed style of his singing and piano playing, he was one of the most popular Negro entertainers in the U.S. Originally named Nathaniel Adams Coles, he was a minister's son. He sang in his father's church, later organized a jazz band, and then worked as a solo pianist. In 1937 he organized the King Cole Trio, an instrumental group with soon began to feature his vocalizations. He made many night club and concert appearances, had his own radio and television programs, and appeared in several films, including *St. Louis Blues*.

Cole, Willard G. (58), U.S. editor and publisher; won 1953 Pulitzer Prize for his campaign against Ku Klux Klan: d. Lumberton, N.C., May 28

Coleman, Emil (72), U.S. orchestra leader; his orchestra was notable in U.S. and abroad: d. New York, N.Y., Jan. 26

Collins, Ray (75), U.S. actor; appeared in over 75 film roles; played part of Lieut. Tragg in television series, *Perry Mason:* d. Santa Monica, Calif., July 11

Collins, Russell (65), U.S. actor; played character roles on stage, in films, and in television: d. Hollywood, Calif., Nov. 14

Collip, Dr. James Bertram (72), Canadian scientist; developed insulin, with Sir Frederick Banting, and pioneered in hormone research: d. London, Ont., June 19

Cooper, Earl (79), U.S. auto racer; won national championships in 1913, 1915, and 1917: d. Atwater, Calif., Oct. 22

Cooper, Kent (84), U.S. journalist: b. Columbus, Ind., Mar. 22, 1880; d. West Palm Beach, Fla., Jan. 31, 1965. As head of the Associated Press, he was a pioneer in worldwide journalism, revolutionizing methods for gathering and distributing news. A former Indianapolis newspaper reporter, he established his own press agency and later joined the Associated Press, which he served as general manager from 1925 to 1948 and as executive director from 1948 until his retirement in 1951. His innovations include the transmission of photographs by wire, and the establishment of a worldwide system of news correspondence.

Cosgrave, William T. (85), Irish parliamentarian; was a leading figure in Irish revolution; sentenced to death for his activities in 1916 Easter Rebellion but freed in amnesty of 1917; president of Irish Free State from 1922 to 1932: d. Dublin, Ireland, Nov. 16

Costain, Thomas Bertram (80), U.S. author: b. Brantford, Ont., Canada, May 8, 1885; d. New York, N.Y., Oct. 8, 1965. He was noted for his carefully researched historical novels, including the swashbuckling 13th century romance, *The Black Rose*, published in 1945, which attained great popularity as a book and was made into a successful film, and *The Silver Chalice*, set against a background of early Christianity, which became the best-selling novel of 1952. He began his career as a newspaper reporter in his home town and later worked as editor of the Guelph (Ont.) *Daily Mercury* and *MacLean's Magazine*. After he went to the U.S. in 1910, he was an associate editor of the *Saturday Evening Post* for 14 years. In 1939 he joined Doubleday & Co. as a part-time advisory editor. His first novel, *For My Great Folly*, was published in 1942, when he was 57. Among his 25 books are the four-volume *Pageant of England* (1949–62), a history of the Plantagenets; *The White and the Gold* (1954), a history of French Canada; and *Chord of Steel* (1960), a biography of Alexander Graham Bell.

Cowell, Henry (68), U.S. composer; developed a theory of tone clusters; used unorthodox sounds in his symphonies: d. Shady, N.Y., Dec. 10

Cowen, Joshua Lionel (85), U.S. inventor and businessman; built model trains; founder and chairman of Lionel Corporation from 1945; invented magnesium flash powder used in photography: d. Palm Beach, Fla., Sept. 8

Cowen, Myron (67), U.S. lawyer and diplomat; was U.S. ambassador to Australia (1948–49), the Philippine Republic (1949–51), and Belgium (1952–53): d. Washington, D.C., Nov. 1

Cowling, Donald J. (85), U.S. educator; was president of Carleton College (Northfield, Minn.) from 1909 to 1945: d. Minneapolis, Minn., Nov. 27

Crerar, Henry Duncan Graham (76), Canadian army officer: b. Hamilton, Ont., April 26, 1888; d. Ottawa, Ont., April 1, 1965. As commander of the First Canadian Army in World War II, he was his country's first general to lead an army in battle. During World War I, he served with the Canadian field artillery. In July 1942, while commanding the 2nd Canadian Division, he directed an abortive raid on Dieppe to test German strength in Europe. The fury with which the Germans repulsed the raid convinced the Allies to invade North Africa and delay an invasion of the continent. After taking command of the First Army in 1944, he led campaigns in France, Holland, and Belgium.

Curtis, Margaret (82), U.S. golfer; member of Sports Hall of Fame; won U.S. women's amateur golf championship in 1907, 1911, and 1912: d. Boston, Mass., Dec. 24

Dabrowska, Maria (75), polish author; one of Poland's best known writers, she wrote the saga *Nights and Days*, which was widely translated d. Warsaw, Poland, May 19

Dandridge, Dorothy (41), U.S. actress and singer: b. Cleveland, Ohio, 1924; d. Hollywood, Calif., Sept. 8, 1965. One of the most popular American Negro actresses, she attained motion picture stardom with her down-to-earth performance in the title role of *Carmen Jones* (1954), and in *Island in the Sun* (1957), *Porgy and Bess* (1959), and *Tamango* (1959).

Dane, Clemence (77), English author; wrote novels, plays, and scenarios; her best-known play, *A Bill of Divorcement* (1921), was also a successful film (1932): d. London, England, March 28

Daniel-Rops, Henri (65), French author; wrote many books on religious subjects, including *History of the Church of Christ;* was a member of French Academy: d. Paris, France, July 27

Darnell, Linda (43), U.S. film actress: b. Dallas, Texas, Oct. 16, 1921; d. Chicago, Ill., April 10, 1965. One of Hollywood's most beautiful and talented actresses, she appeared in over 50 films after her discovery at the age of 14 by a talent scout. Her films include *Star Dust* (1940), *Brigham Young* (1940), *Blood and Sand* (1941), *Summer Storm* (1944), *Hangover Square* (1945), *Anna and the King of Siam* (1946), *Forever Amber* (1947), *A Letter to Three Wives* (1948), and *No Way Out* (1950).

Davidson, Carter (60), U.S. educator and author; was president of Association of American Colleges from 1964: d. Washington, D.C., Oct. 20

Davis, Arthur C. (71), vice-adm. (ret.) U.S. Navy; was pioneer in technique of dive bombing; developer of Norden bombsight: d. Bethesda, Md., Feb. 10

Debenham, Frank (82), Australian explorer; a survivor of Scott Antarctic expedition of 1910; wrote *The Way of Ilala* (1956), and *Antarctica* (1960): d. Cambridge, England, Nov. 23

de Havilland, Sir Geoffrey (82), British aviation pioneer: b. July 27, 1882; d. London, England, May 21, 1965. An aircraft designer for more than 50 years, he built his first successful airplane in 1910. In 1924 he developed the low-cost, lightweight Moth, a two-seater plane, with which he attained the world altitude record of 21,000 feet in 1928. During World War II he built jet fighters and developed the Mosquito, a long-range reconnaissance bomber that was then the fastest aircraft in the world. His design, in 1952, of the Comet, the world's first four-jet airliner, enabled the British aircraft industry to hold its own against U.S. competition. After serving as a Royal Flying Corps officer and test pilot in World War I, he founded the de Havilland Aircraft Co. in 1920, serving as its technical director until 1955. He was knighted in 1944.

Delgado, Humberto (59), Portuguese general and politician; was opposition leader; headed 1964 conspiracy against Salazar regime: d. (body found), Villaneuva del Fresno, Badajoz, Spain, April 24

DeMarco, Tony (67), U.S. dancer; starred in vaudeville, nightclubs, and motion pictures for 40 years: d. West Palm Beach, Fla., Nov. 15

Deramus, W.N. (77), U.S. railroad executive; was president of Kansas City Southern Railroad from 1941 to 1961: d. Kansas City, Kans., Dec. 2

DeVane, William Clyde (67), was dean of Yale College at Yale University from 1938 to 1963: d. Greensboro, Vt., Aug. 16

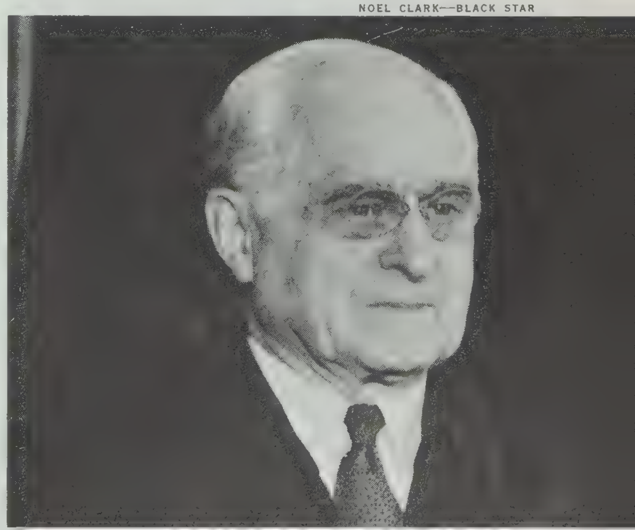
Diller, Burgoyne (59), U.S. painter; was one of first American painters to use geometric abstraction: d. New York, N.Y., Jan. 30

Dimbleby, Richard (52), British television commentator; won international recognition for authoritative presentation of news, public events, and royal ceremonies: d. London, England, Dec. 22

Divine, Father (83?), U.S. religious cult leader: b. near Savannah, Ga., 1882 (?); d. Philadelphia, Pa., Sept. 10, 1965. As founder of the Peace Mission cult, or Kingdom of Peace, he was regarded by his followers as the incarnation of God. His movement practices a primitive type of communism, stressing peace, asceticism, celibacy, and communal living. It is basically nonsectarian, international, and interracial although most of its members are American Negroes. Little is known about the early life of Father Divine. (It is believed his original name was George Baker.) He was said to have preached in the South for a number of years before going to the North about 1914, setting up headquarters in New York City and moving later to Philadelphia. He acquired much of his mass following in the 1930's and 1940's, when he spoke frequently in public, and his periodical, *New Day*, had a wide circulation.

Felix Frankfurter, U.S. Supreme Court justice.

NOEL CLARK—BLACK STAR



Dixon, Frank (73), U.S. public official; was governor of Alabama from 1939 to 1943: d. Birmingham, Ala., Oct. 11

Dixon, Sir Pierson John (60), British diplomat: b. Englefield Green, Surrey, England, Nov. 13, 1904; d. Egham Hill, Surrey, April 21, 1965. One of Britain's most skilled diplomats he served as permanent representative to the United Nations from 1954 to 1960. After entering the foreign service in 1929, he held diplomatic posts at Madrid, Ankara, and Rome. During World War II he accompanied Foreign Minister Anthony Eden to the Middle East, Greece, and Turkey, and later was adviser to Harold Macmillan at Allied forces headquarters in Algiers. From 1943 to 1945 he was Eden's principal private secretary, and continued in this post until 1947 under the new foreign minister, Ernest Bevin. Later he served as ambassador to Czechoslovakia, deputy undersecretary of state, and delegate to the NATO Council. Before his retirement in 1965, he was British ambassador in Paris. A classical scholar, he wrote *The Iberians of Spain* (1940) and *Farewell, Catullus* (1953).

Dodd, Edward H. (96), U.S. publisher; was president (1916–28) and chairman (1928–38) of Dodd, Mead and Co.: d. Litchfield, Conn., June 19

Douglass, Jesse(68), U.S. mathematician; won 1936 Fields Medal of the International Congress of Mathematicians at Oslo, Norway: d. New York, N.Y., Oct. 7

Dow, Warren A. (60), U.S. fencer; was member of U.S. fencing team at 1936 Berlin Olympics; national champion in 1942 and 1943; captain of U.S. team at Olympics in London, 1948: d. Westwood, N.J., Nov. 22

Dresser, Louise (84), U.S. actress; performed in vaudeville and silent films; co-starred with Will Rogers in *State Fair* and *David Harum:* d. Woodland Hills, Calif., April 24

Drew, Elizabeth (77), U.S. educator; professor of English literature at Smith College (1946–61); wrote *The Literature of Gossip* (1964): d. Northhampton, Mass., April 7

Dryden, Hugh L. (67), U.S. aerodynamics expert; was deputy administrator of the National Aeronautics and Space Administration (NASA) from its inception in 1958: d. Washington, D.C., Dec. 2

Du Mont, Allen B. (64), U.S. inventor: b. Brooklyn, N.Y., Jan. 29, 1901; d. New York, N.Y., Nov. 15, 1965. A pioneer in television technology, he simplified and improved the cathode-ray tube (picture tube). After receiving an electrical engineering degree from Rensselaer Polytechnic Institute in 1924, he founded Du Mont Laboratories in 1931 and served as its president for 25 years. In 1939 his company became the first to market a home television receiver. In 1946 he established the Du Mont television network. Although by 1960 control of the Du Mont broadcasting and manufacturing interests had passed to others, Du Mont stayed on as a senior technical consultant. The holder of more than 30 patents on cathode-ray tubes and other television equipment, he invented the "magic eye."

Dumont, Margaret (75), U.S. stage and motion picture comedienne; was leading lady with Marx Brothers on the stage and in films; d. Los Angeles, Calif., March 6

Dundee, Johnny (74), U.S. boxer; former world featherweight champion (1923–24): d. East Orange, N.J., April 22

du Pont, William, Jr. (69), U.S. banker and sportsman; was president of Delaware Trust Company; director of E.I. du Pont de Nemours & Co. from 1930; architect of horse racing courses: d. Wilmington, Del., Dec. 31

Duque, Tomas (75), Panamanian newspaper publisher; was Panama's first vice president; served as president for 23 days in 1928: d. Panama, April 1

Eisenhart, Luther P. (89), U.S. educator; internationally known mathematician; was dean of Princeton University Graduate School (1933–1945): d. Princeton, N.J., Oct. 28

El-Rifai, Samir (66), Jordanian diplomat; was premier of Jordan six times between 1944 and 1963: d. Amman, Jordan, Oct. 12

***Eliot, T.S.** (76), expatriate American poet: d. London, England, Jan. 4

Elisabeth (89), dowager queen of Belgium: b. Bavaria, Germany, July 7, 1876; d. Brussels, Belgium, Nov. 23, 1965. Eulogized at her death as ". . . the queen without frontiers," she was a doctor of medicine, a violinist, an Egyptian scholar, and a campaigner for women's suffrage. The daughter of Duke Karl Theodor and Marie Thérèse of Braganza, she married Albert, heir to the Belgian throne, on Oct. 2, 1900. The couple ascended the throne in 1909. Always deeply concerned with the welfare of her adopted homeland, she remained in Belgium during World War I, nursing the wounded and donating her jewels for the benefit of the homeless. After King Albert was killed in 1934, their son became king as Leopold III. During World War II, Queen Elisabeth refused to be moved from Belgium by the Germans.

Elizalde, Joaquín Miguel (68), Philippine government official; former foreign secretary; ambassador to UN from 1956: d. Washington, D.C., Feb. 9

Elliott, William (62), U.S. actor; starred in Western motion pictures and on television; appeared in *Wild Bill Hickok* and *Red Ryder* serials: d. Las Vegas, Nev., Nov. 26

Emmons, Gen. Delos C. (76), U.S. Army officer; was military governor of Hawaii during World War II: d. San Francisco, Calif., Oct. 5

Erkko, Eljas (69), Finnish statesman and publisher; was foreign minister in 1939 at outbreak of war with Russia; owned Finland's largest newspaper; d. Helsinki, Finland, Feb. 20

Erlanger, Joseph (91), U.S. physiologist; shared 1944 Nobel Prize in medicine and physiology for work in analyzing nerve impulses: d. St. Louis, Mo., Dec. 5

Erskine, Sir George (66), British army officer; commanded "desert rats" in North African campaign of World War II: d. Somersetshire, England, Aug. 28

Esposito, Vincent (65), U.S. Army officer; military historian; was chief editor of *The West Point Atlas of American Wars;* prepared *A Concise History of World War I* and *A Concise History of World War II,* published in the ENCYCLOPEDIA AMERICANA, of which he was advisory editor: d. Washington, D.C., June 10

Estes, Wayne (21), U.S. athlete; was basketball star at University of Utah and leading candidate for All-America honors: d. (in accident) Logan, Utah, Feb. 9

Evatt, Herbert Vere (71), Australian statesman: b. East Maitland, Australia, April 30, 1894; d. Canberra, Australia, Nov. 2, 1965. He served as Australia's foreign minister and attorney general from 1941 to 1949, and as head of the Labour party from 1951 to 1960. He earned his doctorate in law from Sydney University, and at the age of 36 became the youngest man to be named judge of the High Court of Australia. He left the bench in 1940 to enter politics. While serving as foreign minister, he played a key role in drafting the UN Charter at San Francisco in 1945 and was president of the UN General Assembly in 1948–49.

Fahnestock, Sheridan (52), U.S. explorer and publisher; headed a number of expeditions to the South Seas; published *Lexington Park Enterprise:* d. Park Hall, St. Mary's County, Md., Aug. 27

Farouk I (45), former king of Egypt: b. Cairo, Egypt, Feb. 11, 1920; d. Rome, Italy, March 18, 1965. Noted for his fondness for luxurious living, he did little to solve Egypt's national problems or enhance its status on the world scene. Educated at the Royal Military Academy in England, he succeeded his father, King Fuad, in April 1936. In the beginning of his reign, he exercised considerable power under the constitution and promised major social reforms. After World War II, during which Egypt held to a nonbelligerent status, he sponsored the Arab League. In 1951 he abrogated a treaty of alliance with Britain and sponsored self-government for the Sudan under Egyptian suzerainty. In July 1952 he abdicated after a coup d'état led by Maj. Gen. Mohammed Naguib and Lt. Col. Gamal Abdel Nasser.

Field, Marshall, Jr. (49), U.S. newspaper publisher: b. Chicago, Ill., June 15, 1916; d. Chicago, Sept. 18, 1965. He was editor and publisher of the Chicago *Sun-Times* and, after 1959, of the Chicago *Daily News.* The great-grandson of the founder of the Chicago department store Marshall Field and Co., he graduated from Harvard and from the University of Virginia law school. After military service in World War II, he began his newspaper career with the Chicago *Sun,* which had been founded by his father, working in various departments and as a reporter. He was chairman of the board of Field Enterprises.

Fiene, Ernest (70), German-American painter; was noted for his realistic oils and lithographs: d. Paris, France, Aug. 10

Figl, Leopold (62), Austrian statesman: b. Rust, Austria, Oct. 2, 1902; d. Vienna, Austria, May 9, 1965. A chancellor of Austria from 1945 to 1953, he was largely responsible for obtaining Austria's military neutrality and independence in 1955 from the four-power military occupation after World War II. Becoming director of the Peasants Union of Lower Austria in 1933, he voiced opposition to the proposed tariff and customs union between Austria and Germany during the 1930's. As a result, he was arrested by the Nazis when they occupied Austria in 1938 and was held in concentration camps until 1943. After his release, he joined the farmers' underground movement and was arrested again in 1944. Saved by the invasion of Allied troops in 1945, he turned to organizing the People's party. He later served as foreign minister (1953–59) and president of Parliament (1952–62).

Fisher, Henry Johnson (91), U.S. publisher and philanthropist; was vice president of Crowell Publishing Co. (1906–10); chairman of Popular Science Publishing Co. and McCall Corporation (1917–45): d. Greenwich, Conn., June 25

Flynn, John A. (64), U.S. clergyman; president of St. John's University (New York City), from 1947 to 1961: d. New York, N.Y., July 22

Fossati, Maurilio (88), Italian cardinal; was archbishop of Turin from 1930: d. Rome, Italy, March 30

Foster, Claud H. (92), U.S. inventor and philanthropist; invented the Gabriel Snubber, a shock absorber, widely used in the United States and Europe: d. Bellevue, Ohio, June 21

Frankfurter, Alfred M. (59), U.S. writer and editor; was editor of *Art News* and an international authority on art; d. Jerusalem (Israeli sector), May 12

Frankfurter, Felix (82), U.S. Supreme Court justice: b. Vienna, Austria, Nov. 15, 1882; d. Washington, D.C., Feb. 22, 1965. One of the most influential American jurists, he served as associate justice of the U.S. Supreme Court from his appointment by President Franklin D. Roosevelt in 1939 until his retirement in 1962. A graduate of Harvard law school, he became a member of the Harvard law faculty in 1914, serving concurrently in various federal government posts, including work with the War and Labor departments during World War I. In 1919 he supported Zionism at the Versailles Peace Conference. An early champion of constitutional liberties and a founder of the American Civil Liberties Union, he opposed the Palmer raids against alleged subversives after World War I and was critical of the convictions in the Tom Mooney and the Sacco-Vanzetti cases. During the early years of the New Deal he served as an adviser to the Roosevelt administration. On the Supreme Court he represented a position of judicial restraint, emphasizing the limited function of the judiciary in a democracy and seeking to maintain a balance between individual rights and the public interest. He supported the 1951 conviction of Communist leaders under the Smith Act and played an important part in the formulation of the 1954 public school desegregation decision. His books include *Mr. Justice Holmes and the Supreme Court* (1938).

Freed, Alan (43), U.S. disk jockey; coined the term "rock 'n roll" and was credited with making that type of music popular in 1950's: d. Palm Springs, Calif., Jan. 20

Fuld, Leonhard Felix (82), U.S. philanthropist; was a lawyer, an economist, and an expert in police administration: d. Trenton, N.J., Aug. 31

Funk, Wilfred John (82), U.S. book publisher: b. Brooklyn, N.Y., March 20, 1883; d. Montclair, N.J., June 1, 1965. The son of the founder of the dictionary and encyclopedia publishing firm, Funk & Wagnalls, he served as its president from 1925 until 1940, when he founded, and became president of, his own publishing concern, Wilfred Funk, Inc. An authority on popular etymology, he was coauthor with Norman Lewis of *30 Days to a More Powerful Vocabulary* (1942) and wrote several other books in this field, as well as the monthly *Reader's Digest* feature "It Pays to Increase Your Word Power." His books of light verse include *Love, Life and Laughter* (1942)

Furman, N. Howell (73), U.S. chemist and educator; participated in development of atomic bomb; was responsible for analytical separation of uranium: d. Burlington, Vt., Aug. 2

Gans, Oscar (62), Cuban diplomat; signed UN Charter in 1945 as Cuban representative; was Cuba's last constitutional premier (1951, 1952): d. (in exile) Mexico City, Mexico, Dec. 7

Gatto, Victor Joseph (71), U.S. painter; won recognition as authentic primitive artist: d. Miami, Fla., May 25

Gavrilovic, Stoyan (70), Yugoslav government official; was first chairman of UN Site Commission: d. New York, N.Y., Feb. 2

Gaylani, Rashid Ali (73), Iraqi statesman; was premier four times from 1933 to 1941; sentenced to death in absentia (1942) and returned from exile in 1958: d. Beirut, Lebanon, Aug. 28

Gerlier, Pierre (85), French cardinal (1937); was also archbishop of Lyon: d. Lyon, France, Jan. 17

Gheorghiu-Dej, Gheorghe (63), Rumanian Communist leader: b. Barlad, Rumania, Nov. 8, 1901; d. Bucharest, Rumania, March 19, 1965. As first secretary of the Central Committee of the Rumanian Workers (Communist) party after World War II and chief of state from 1961, he guided Rumania along the road of industrial development and toward increased independence from the USSR. A member of the Rumanian Communist party from 1930, he was imprisoned for 11 years for his role in organizing a major strike. In 1945 he was named party chief by Soviet Premier Stalin, and in 1954 he became premier. In a governmental reorganization in 1961, he was elected president of the Council of Ministers.

Giannattasio, Luis (70), Uruguayan public official; was president of Uruguay's national government council from 1964: d. Montevideo, Uruguay, Feb. 7

Giao, Phan Van (65), Vietnamese general: was adviser to Emperor Bao Dai; minister of state and governor of Annam (1948–55): d. Saint-Hilaire-Saint Florent, France, Nov. 13

Gildersleeve, Virginia C(rocheron) (87), U.S. educator: b. New York, N.Y., Oct. 3, 1877; d. Centerville, Mass., July 7, 1965. One of the leading educators in the U.S., she was dean of Barnard College (Columbia University) from 1910 until her retirement in 1947. Her approach to education was progressive, based on common sense rather than tradition, and she was responsible for many innovations in the field. A graduate of Barnard, she began her career as an English teacher there in 1900, and later obtained doctorates at Columbia and Rutgers universities. During World War II she headed the Advisory Council for the Women's Naval Reserve, which established the WAVES, and after the war she helped to set up a new educational system in Japan. For many years interested in international affairs, she was the only U.S. woman delegate to the UN Conference at San Francisco in 1945, and she helped to establish UNESCO. Her books include an autobiography, *Many a Good Crusade* (1954).

Girdler, Tom Mercer (87), U.S. executive; was president and board chairman of Republic Steel Corp.; former president of Jones & Laughlin Steel Corp.: d. Easton, Md., Feb. 4

Gitlow, Benjamin (73), U.S. politician; founder of Communist party of U.S.; was his party's candidate for vice president in 1924 and 1928; convicted of criminal anarchy; pardoned in 1925: d. Crompound, N.Y., July 19

Gomes, Azevado (79), Portuguese political leader; was active in opposition to Salazar; president of Social Democratic opposition since 1952: d. Lisbon, Portugal, Dec. 12

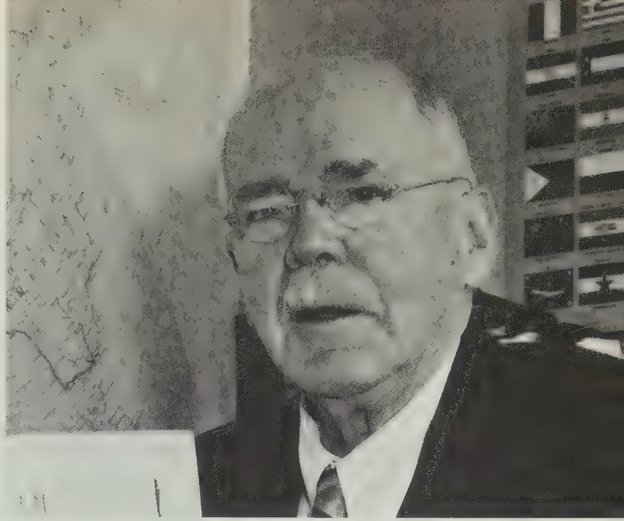
Gomez, Laureano (76), Colombian political leader: b. Bogotá, Colombia, Feb. 20, 1889; d. Bogotá, July 13, 1965. As president of Colombia (1950–53), he instituted a right-wing dictatorship, suspended civil liberties, and suppressed the Liberal party. He began his political career in 1911 as a member of the lower house of Congress, later serving as minister of public works, minister to Germany, and senator. In the 1930's he headed Colombia's Conservative party, and during World War II he openly sided with the Axis. After the overthrow of his dictatorship by Lt. Gen. Gustavo Rojas Pinilla in 1953, he went into exile in Spain. He resumed leadership of the Conservative party in 1957.

Gonzales, Luis A. (65), Guatemalan government official; was provisional president for 3 months in 1957: d. Guatemala, Nov. 11

Graf, Sonja (51), U.S. women's chess champion; won U.S. women's open championship four times during the 1950's: d. New York, N.Y., March 6

Graham, Frank (71), U.S. sportswriter; covered baseball, boxing, and racing; wrote the column, *Graham's Corner*, for N.Y. *Journal American*: d. New York, N.Y., March 9

Graham, Gwethalyn (52), Canadian author: wrote *Swiss Sonata* (1938) and *Earth and High Heaven* (1944): d. Montreal, Que., Nov. 24


PICTORIAL PARADE

H.V. Kaltenborn, news analyst.

Grant, Vice Adm. Harold T. (66), Canadian naval officer; was former chief of naval staff (1947–50); as captain of cruiser *Enterprise* in World War II, defeated fleet of 11 German destroyers in Bay of Biscay: d. Ottawa, Ont., May 8

Graves, Alvin C. (55), U.S. physicist; developed first U.S. atomic pile in 1942; directed atomic testing at Los Alamos from 1942: d. Del Norte, Colo., July 29

Green, Charles C. (83), U.S. businessman; managing director, Advertising Club of New York, from 1940; was known as "patron saint" of advertising: d. Forest Hills, N.Y., July 16

Greenberg, Henry Clay (68), U.S. judge; was a justice of New York State Supreme Court from 1946; made many important legal decisions: d. New York, N.Y., March 9

Grew, Joseph Clark (84), U.S. diplomat: b. Boston, Mass., May 27, 1880; d. Manchester, Mass., May 25, 1965. As U.S. ambassador to Japan from 1931 to 1941, he warned of Japanese plans for an attack on Pearl Harbor. A career diplomat, he joined the U.S. Foreign Service in 1905 and was counselor of the embassy in Berlin in 1916–17. Later, he served as acting chief of the State Department's Division of Western European Affairs, secretary at the Versailles Peace Conference, chairman of the Division of Foreign Service Personnel, and ambassador to Turkey. Before his retirement in 1945 he served as special assistant to the secretary of state, as director of the Office of Eastern Affairs, and as undersecretary of state.

Gruenberg, Benjamin C. (89), Russian-born American educator and author; was a leader in science education, and wrote textbooks on sex education: d. New York, N.Y., July 1

Hall, Viscount (George Henry Hall) (83), British government official; was first lord of the admiralty in Labour government from 1946 to 1951: d. London, England, Nov. 8

Hambro, John Henry (61), English banker; was chairman of Hambro's Bank from 1963: d. London, England, Dec. 4

Hammond, John H., Jr. (76), U.S. inventor; his electronic patents contributed to development of radio, television, and radar: d. New York, N.Y., Feb. 12

Hancher, Virgil M. (68), U.S. educator: b. Rolfe, Iowa, Sept. 4, 1896; d. New Delhi, India, Jan. 30, 1965. A Rhodes Scholar and former lawyer, he served as president of the University of Iowa from 1940 until his retirement in 1964. He was a former chairman of the American Council on Education and the Education Policies Commission, and acted as U.S. educational representative at the UN.

Hansberry, Lorraine Vivian (34), U.S. playwright: b. Chicago, Ill., May 19, 1930; d. New York, N.Y., Jan. 11, 1965. One of the most promising young Negro writers in the United States, she was best known for her play *A Raisin in the Sun*, which dealt with the aspirations and frustrations of a Chicago Negro family. The play won the New York Drama Critics Circle Award as the best American play of the 1959 season, and it was later made into a film. Her second play, *The Sign in Sidney Brustein's Window*, the story of an idealistic Jewish intellectual in Greenwich Village, was produced on Broadway in 1964.

Harkavy, Harold J. (50), U.S. bridge instructor; was winner of Vanderbilt and Spingold team championships (1963): d. San Francisco, Calif., Nov. 29

Harrington, Pat., Sr. (64), U.S. actor; was a nightclub singer and musical comedy star: d. Islip, N.Y., Sept. 2

Haussermann, John (97), U.S. mining financier; was known as Philippine "gold king": d. Cincinnati, Ohio, July 11

Hawley, Gen. Paul R. (74), U.S. Army officer; was chief surgeon of European Theater of Operations in World War II; chief medical director of Veterans Administration (1945–48); and chief executive officer of Blue Cross and Blue Shield Commission (1948–50): d. Washington, D.C., Nov. 25

Heintzelman, Arthur W. (74), U.S. painter and etcher; his works, stressing religious themes and rural American life, are widely exhibited in U.S. and Europe: d. Rockport, Mass., April 4

Heintzleman, B. Frank (77), U.S. public official; was governor of Alaska, 1953–57: d. Juneau, Alaska, June 24

Hench, Philip Showalter (69), U.S. medical researcher: b. Pittsburgh, Pa., Feb. 28, 1896; d. Ochos Rios, Jamaica, March 30, 1965. A specialist in arthritic diseases, he shared the 1950 Nobel Prize in medicine for his research on hormones that led to the successful treatment of rheumatoid arthritis with cortisone. After graduating from the University of Pittsburgh School of Medicine in 1920, he became a fellow of the Mayo Foundation. From 1923 until his retirement in 1957, he was associated with the Mayo Clinic, becoming director of its department of rheumatoid diseases in 1926, and later heading its division of medicine. As a colonel in the Army Medical Corps during World War II, he directed the Army's rheumatism center.

Hess, Dame Myra (75), English musician; was one of world's leading pianists: d. London, England, Nov. 25

Earl Alexander of Hillsborough (Albert Victor) (79), British government official; was first lord of the admiralty (1929–31; 1940–45; 1945–46): d. London, England, Jan. 11

Hives, Lord Ernest Walter (79), British engineer and industrialist; was chairman of Rolls-Royce, Ltd. (1950–57): d. London, England, April 24

Hohner, Ernst (79), German manufacturer; headed House of Hohner, makers of musical instruments: d. Trossingen, Germany, Oct. 15

Holcomb, Gen. Thomas (85), U.S. Marine Corps officer; commandant of corps (1936–44); served in Philippines and China in World War I; was minister to South Africa (1944–48): d. New Castle, Del., May 24

Holliday, Judy (Judith Tuvim) (42), U.S. actress: b. New York, N.Y., June 21, 1922; d. New York, June 7, 1965. One of the most intelligent comediennes of stage and screen, she was best known for her role as Billie Dawn in Garson Kanin's Broadway hit *Born Yesterday* (1946). When she recreated the role on the screen, she won the 1950 Academy Award as best actress. She began her show business career in a Greenwich Village revue with Adolph Green and Betty Comden, and made her Broadway debut in the comedy *Kiss Them for Me*, which won her the Derwent Prize as best supporting actress of 1945. For her performance as a telephone operator in the Broadway musical *The Bells Are Ringing* (1956), she received an Antoinette Perry Award. She later repeated this role on the screen. Her other motion pictures include *Adam's Rib* (1949), *The Marrying Kind* (1952), *Phfft* (1954), and *The Solid Gold Cadillac* (1956).

Howard, Eugene (84), U.S. actor; was comedy star in theater and vaudeville with his brother Willie: d. New York, N.Y., Aug. 1

Howard, Peter D. (56), English journalist; leader of moral re-armament movement; wrote plays on that theme, including *Voice of the Hurricane*, and published a collection of speeches, *Design for Dedication* (1964): d. Lima, Peru, Feb. 25

Huddleson, I. Forest (71), U.S. bacteriologist; an authority on brucellosis: d. Lansing, Mich., May 26

Hylton, Jack (72), British play producer; his latest play was *Camelot*: d. London, England, Jan. 29

Hylton-Foster, Sir Harry (60), British statesman; was member of Parliament (from 1950) and speaker of House of Commons under Conservative and Labour governments (from 1959): d. London, England, Sept. 2

Ikeda, Hayato (65), Japanese public official: b. Hiroshima Prefecture, Japan, Dec. 3, 1899; d. Tokyo, Japan, Aug. 13, 1965. One of Japan's most skilled economists, he served as finance minister during the 1950's and as premier from 1960 to 1964. After graduating from Kyoto Imperial University, he became a tax official with the finance ministry. Following World War II, he was elected to the House of Representatives in 1946 and became vice minister of finance. Between 1949 and 1960, he alternately served as finance minister and as head of the Economic Planning Board and the Ministry of International Trade and Industry. In these posts he was responsible for anti-inflationary reforms that brought Japan to the height of prosperity. As successor to Premier Nobusuke Kishi, he was noted for his skill as a conciliator, and he worked toward scaling down foreign trade barriers against Japanese goods. His policies, like those of his postwar predecessors, were generally pro-American.

Ingelbrecht, Désiré Émile (84), French composer and conductor; founded Orchestre National de la Radiodiffusion Française in 1934: d. Paris, France, Feb. 14

Inman, Samuel G. (77), U.S. educator and authority on Latin-American affairs; helped Pres. Franklin D. Roosevelt draw up Good Neighbor policy; served as an adviser to Latin-American governments; was a contributor to ENCYCLOPEDIA AMERICANA: d. Bronxville, N.Y., Feb. 19

Ismay, Lord (Gen. Sir Hastings Lionel Ismay) (78), British soldier and statesman: b. Naini Tal, India, June 21, 1887; d. Stanton, England, Dec. 17, 1965. A professional soldier, he was adviser to Sir Winston Churchill in World War II, and later served as secretary general of NATO (1952–57). The son of the chief judge of the Mysore (India) Chief Court, he attended Sandhurst military school and was commissioned in 1905. His first service was with the 21st Cavalry in India and Somaliland. From 1926 to 1939 he served in various positions on the Imperial Defense Committee. In 1940 he was appointed by Prime Minister Winston Churchill to head his personal staff and to serve as military secretary to the War Cabinet. He also served in Churchill's postwar cabinet as secretary for Commonwealth relations (1951). Ismay was knighted in 1940, elevated to the peerage (1947), and made knight of the Garter (1957).

Jackson, Shirley (45), U.S. author: b. San Francisco, Calif., Dec. 14, 1919; d. North Bennington, Vt., Aug. 8, 1965. She was best known for her books and stories dealing with insanity, witchcraft, and the supernatural. Her short story "The Lottery," first published in the *New Yorker* in 1948, came to be regarded as a classic horror story. A graduate of Syracuse University (1940), she contributed widely to magazines. Her books in a macabre vein include *Hangsaman* (1951), *The Bird's Nest* (1954), *The Sundial* (1958), *The Haunting of Hill House* (1959), and *We Have Always Lived in the Castle* (1962). In a lighter vein, she wrote *Life Among the Savages* (1953) and *Raising Demons* (1957), about her own family life.

Jarrell, Randall (51), U.S. poet: b. Nashville, Tenn., May 6, 1914; d. Chapel Hill, N.C., Oct. 14, 1965. Regarded as one of the most skilled of the younger generation of poets, he won the 1960 National Book Award for poetry for his collection *The Woman at the Washington Zoo*. A graduate of Vanderbilt University, he contributed widely to literary journals and worked as a literary editor and critic. His books include *Blood of a Stranger* (1942), *Little Friend, Little Friend* (1945), *Losses* (1948), *The Seven-League Crutches* (1951), *Poetry and the Age* (1953), *Pictures from an Institution* (1954), *Selected Poems* (1955), *The Anchor Book of Stories* (1958) and *A Sad Heart at the Supermarket* (1962).

Jeffries, Zay (77), U.S. metallurgist; worked on Manhattan Project for development of atomic bomb; was vice president, General Electric Co. (1945–49): d. Pittsfield, Mass., May 21

Jennings, Sir Ivor (62), English lawyer and educator; was international authority on constitutional law; helped draft constitutions of Pakistan and Malaya; also advised them, and India, on their respective university systems: d. Cambridge, England, Dec. 19

Johnson, C. Oscar (79), U.S. clergyman; was president of World Baptist Alliance (1947–50): d. Oakland, Calif., Nov. 24

Johnson, Luther A. (89), U.S. congressman (Democratic) from Texas, 1923–46; was federal tax court judge (1946–58): d. Corsicana, Texas, June 6

Johnson, Rita (52), U.S. actress; appeared in the film, *My Friend Flicka* (1943); also acted on stage, radio, and television: d. Hollywood, Calif., Oct. 31

Johnson, Roy W. (59), U.S. businessman and government official; was vice-president of General Electric Company from 1944; first administrator of U.S. space program (1958–59): d. Stamford, Conn., July 22

Johnson, W. Maclean (49), U.S. publisher; was vice president of McGraw Hill's Webster Publishing Division in St. Louis: d. Vienna, Austria, Nov. 5

Johnson, Wendell (59), U.S. speech therapist; was founder and chairman of American Speech and Hearing Foundation; wrote extensively on speech problems: d. Iowa City, Iowa, Aug. 29

Johnston, Olin DeWitt (68), U.S. senator: b. Anderson County, S.C., Nov. 18, 1896; d. Columbia, S.C., April 18, 1965. As Democratic senator from South Carolina from 1945, he generally represented a liberal viewpoint and supported the Truman, Kennedy, and Johnson administrations. On issues involving civil rights, however, he upheld the white supremacist position. A law graduate of the University of South Carolina, he served in the state legislature and was governor of South Carolina from 1935 to 1939 and from 1943 to 1945. In the Senate he served on the Agricultural and Judiciary committees. As chairman of the Senate Post Office and Civil Service committee, he was noted for his concern for the interests of federal employees.

Johnston, Thomas (83), Scottish statesman; was secretary of state for Scotland (1941–45) and chancellor of Aberdeen University from 1951: d. Milngavie, Scotland, Sept. 5

Jonas, Edgar A. (79), was U.S. congressman (Republican) from Illinois from 1949 to 1954: d. Chicago, Ill., Nov. 15

Jones, Eleanor Dwight (84), U.S. pioneer in birth control movement; was president of American Birth Control League from 1929 to 1935: d. Riverhead, N.Y., July 29

Jones, Spike (Lindley Armstrong) (53), U.S. bandleader: b. Long Beach, Calif., Dec. 14, 1911; d. Los Angeles, Calif., May 1, 1965. A master of musical burlesque, he was noted for zany takeoffs on popular music. His band, the City Slickers, used such instruments as washboards, cowbells, and automobile horns. After playing as a drummer with John Scott Trotter's band, he organized his own group, which had its first success in 1942 with a recording of the anti-Nazi burlesque *Der Fuehrer's Face*.

Jones, Paul (84), U.S. jurist; was U.S. district judge in Ohio from 1923: d. Shaker Heights, Ohio, Aug. 4

Jordan, Bobby (42), U.S. actor; played role of "Angel" in stage and film versions of the play *Dead End* and in *Dead End Kid* series: d. Sepulveda, Calif., Sept. 10

Jud, Mrs. Herman H. (62), was the former Princess Xenia of Russia: d. Glen Cove, N.Y., Sept. 17

Kalmus, Natalie M. (87), U.S. film technician; was codeveloper of technicolor process: d. Boston, Mass., Nov. 15

Kaltenborn, H(ans) V(on) (86), U.S. news commentator: b. Milwaukee, Wis., July 9, 1878; d. New York, N.Y., June 14, 1965. One of the leading American news analysts for some 30 years, he was noted for his frank, often controversial commentaries and for his incisive analyses of such events as the Munich crisis of 1938. An honor graduate of Harvard, he worked for a number of years as a newspaper reporter. He gave his first radio news analysis in 1922, while on the staff of the *Brooklyn Eagle*, and later analyzed the news in regular broadcasts for the Columbia Broadcasting System from 1929 to 1940, and for the National Broadcasting Company from 1940 to 1955. His writings include the autobiography *Fifty Fabulous Years* (1950).

Kawakami, Jotaro (76), Japanese political leader; was chairman of Socialist party from 1961 until March 1965: d. Nirayama, Japan, Dec. 3

Kerr, Sophie (84), U.S. author; was formerly managing editor of *Woman's Home Companion:* d. New York, N.Y., Feb. 6

Kilgallen, Dorothy Mae (52), U.S. newspaper columnist: b. Chicago, Ill., July 3, 1913; d. New York, N.Y., Nov. 8, 1965. She was best known as a regular panelist (from 1949) on the television show *What's My Line?*, for her gossip column "The Voice of Broadway" (begun in 1938), and for her appearances with her husband, Broadway producer Richard Kollmar, on the radio show *Breakfast with Dorothy and Dick* (1945–63). The daughter of a newspaper reporter, she began her career as a cub reporter for the New York *Evening Journal*. She first gained national recognition by her coverage of an around-the-world commercial air race in 1936.

Kilpatrick, William Heard (93), U.S. philosopher and educator: b. White Plains, Ga., Nov. 20, 1871; d. New York, N.Y., Feb. 13, 1965. A pioneer in progressive education and a close associate of John Dewey, he was a member of the faculty of Columbia University Teachers College from 1909 until 1937 At the time of his retirement he held the post of professor of the philosophy of education. Early in his career he stirred considerable controversy by his unorthodox teaching methods. Rejecting philosophical absolutes, he stressed the empirical approach and helped revolutionize American education.

King, Alexander (66), U.S. author and television personality: b. Vienna, Austria, Nov. 13, 1899; d. New York, N.Y., Nov. 16, 1965. An acerb commentator on contemporary life, he achieved his widest popularity from his appearances on the Jack Paar *Tonight* show on television. Going to the U.S. shortly before World War I, he had a successful career as an illustrator and magazine editor before he fell victim to drug addiction. Recovering from this illness, he gained national prominence with his book *Mine Enemy Grows Older* (1958). His other books include *May This House Be Safe from Tigers* (1960), *I Should Have Kissed Her More* (1961), *Is There A Life After Birth?* (1963), and *Rich Man, Poor Man, Freud and Fruit* (1965).

Kirkland, Weymouth (87), U.S. attorney; senior member of Kirkland, Ellis, Hodson, Chaffetz, and Masters; counsel for Chicago *Tribune* and New York *Daily News:* d. Chicago, Ill., Feb. 3

Klaestad, Helge (79), Norwegian statesman; served in Norwegian State Department (1921); appointed judge of the Norwegian Supreme Court (1932): d. Oslo, Norway, May 23

Knappertsbusch, Hans (77), German opera conductor; was a leading interpreter of Wagnerian opera: d. Munich, Germany, Oct. 25

Koht, Halvdan (92), Norwegian historian; wrote *The American Spirit in Europe: A Study of Transatlantic Influences* (1949); was foreign minister in Labor government from 1935 to 1940: d. Oslo, Norway, Dec. 12

Kono, Ichiro (67), Japanese government official; was minister in charge of 1964 Olympic Games: d. Tokyo, Japan, July 8

Kopman, Benjamin (77), Russian-born American painter; his graphic art and illustrations are among collections of major U.S. museums: d. Teaneck, N.J., Dec. 3

Kozlov, Frol Romanovich (56), Soviet Communist leader: b. Loshchinino, Russia, Aug. 1, 1908; d. Moscow, USSR, Jan. 30, 1965. A leading political figure under Nikita S. Khrushchev, he was once regarded as a likely successor to Khrushchev in the post of premier. He joined the Communist party in 1926. After graduating in 1936 from the Leningrad Mining Institute as a metallurgical engineer, he was placed in charge of a steel-rolling mill in Izhevsk. He moved to Moscow in 1944 as an official of the Communist party Central Committee. In 1949 he was transferred to Leningrad, where he became first secretary of the local party organization in 1953, after Khrushchev came to power. As a candidate member of the party Presidium in 1957, he supported Khrushchev in his struggle with the "antiparty" faction, and in late 1957 he was appointed premier of the Russian Republic. In the following year he became first deputy premier of the USSR, resigning this position in 1960 to become a secretary in the Communist party. After Khrushchev's ouster as premier and party chief in 1964, Kozlov was removed from the Presidium.

LaFollette, Philip F. (68), U.S. public official: b. Madison, Wis., May 8, 1897; d. Madison, Aug. 18, 1965. The son of Robert M. LaFollette, the noted Progressive party governor, senator, and presidential candidate, he served as governor of Wisconsin from 1931 to 1933 and from 1935 to 1939. A law graduate of the University of Wisconsin, he was elected district attorney of Dane County in 1925. As governor, he instituted an elaborate reform program that included a securities act and the nation's first state unemployment law. Opposing President Franklin D. Roosevelt's New Deal, he founded the short-lived National Progressives of America in 1938. Although he had been a strong opponent of United States entry into World War II, he served with distinction during the war on Gen. Douglas MacArthur's staff.

Lambeau, Curly (Earl) (67?), U.S. football coach: b. Green Bay, Wis., 1898 (?); d. Sturgeon Bay, Wis., June 1, 1965. One of the founders of the Green Bay (Wisconsin) Packers professional football team in 1919, he served as its coach until 1950, leading it to six National Football League victories (1929–31, 1936, 1939, and 1944) and seven divisional championships, and producing a number of football stars. From 1919 to 1928 he also distinguished himself as quarterback of the team. In 1921 he helped to found the National Football League. After leaving the Packers in 1950 he coached the Chicago Cardinal for two years, and he ended his professional career as coach of the Washington Redskins in 1954.

Lange, Dorothea (70), U.S. photographer; was noted for her photographic studies of "Oakies" and "Dust Bowl" of the Southwest in 1930's: d. San Francisco, Calif., Oct. 11

Lange, Oscar (61), Polish diplomat: was Polish ambassador to the UN, and ambassador to the U.S. from 1946 to 1949; served as Communist deputy premier of Poland in 1956: d. London, England, Oct. 2

Lanham, Fritz D. (84), U.S. public official; was congressman (Democratic) from Texas, 1919 to 1947; and sponsor of the Lanham Act (trademark law): d. Austin, Texas, July 31

Laurel, Stan (Arthur Stanley Jefferson) (74), U.S. film comedian: b. Ulverson, Lancashire, England, June 16, 1890; d. Santa Monica, Calif., Feb. 23, 1965. As the simple-minded, sad-faced fall guy of the Laurel and Hardy comedy team, he appeared in more than 200 films with his corpulent, self-assured partner, Oliver Hardy. A master of pantomime, Laurel was the creator of most of the team's comedy techniques. He began his career as a music hall performer at the age of 16 and went to the United States in 1910 with Fred Karno's troupe, acting occasionally as understudy for Charlie Chaplin. After appearing in several comedy films and in vaudeville, he joined Hal Roach's studio in Hollywood in 1917 as writer, producer, and director of comedy shorts. He teamed up with Hardy in 1926, and together they appeared in such Hal Roach comedies as *Putting the Pants on Philip*, *Men of War*, and *The Chimp*. They made an easy transition from silent to sound films, beginning with *Unaccustomed As We Are* (1931). For their short film *The Music Box*, they received an Academy Award in 1933. Their full-length features include *Pardon Us* (1931), *Pack Up Your Troubles* (1932), *Babes in Toyland* (1934), *The Bohemian Girl* (1936), *Swiss Miss* (1938), *Blockheads* (1938), *A Chump at Oxford* (1940), and *Saps at Sea* (1940).

Leche, Richard W. (66), U.S. public official; was governor of Louisiana (1936–39); was later convicted on charges of corruption and sentenced to prison for using mails to defraud; was pardoned in 1953 by President Truman: d. New Orleans, La., Feb. 22

Le Corbusier (Charles-Édouard Jeanneret-Gris) (77), Swiss-French architect: b. La Chaux-de-Fonds, Switzerland, Oct. 6, 1887; d. Roquebrune Cap-Martin, France, Aug. 27, 1965. Ranked, along with Frank Lloyd Wright and Ludwig Mies van der Rohe, as one of the great architects of the 20th century, he evoked considerable controversy with his revolutionary ideas that a house is "a machine for living," that architecture "must put men under the rules of the sun," and that urban man should live in "sun, space, and silence." His most important works include apartment houses in Marseille and Berlin, the Visual Arts Center at Harvard University, the Ronchamp chapel at Vosges (France), an office building in Moscow, a Salvation Army center in Paris, and government buildings in Rio de Janeiro and Chandigarh (India). Several buildings in New York City, including the UN headquarters, reflect his influence. As a city planner, he drew up blueprints for Paris, Buenos Aires, Antwerp, Algiers, and Montevideo. He settled in Paris in 1917 and became a partner in an architectural firm there in 1924. Proficient as a painter, representing the Purist school, he was cofounder of the magazine *L'esprit nouveau*, in which he expounded his views on art and architecture. He was the author of several books reflecting his humanistic modernism.

Lee, Roger I. (84), U.S. physician; former president of American Medical Association (1945–46); opposed federal hospitalization and health insurance programs, and workers' retirement pension plans: d. Brookline, Mass., Oct. 28

Leonty (Leonid Turkevich) (88), metropolitan of Russian Orthodox Greek Catholic Church (from 1950): d. Syosset, N.Y., May 4

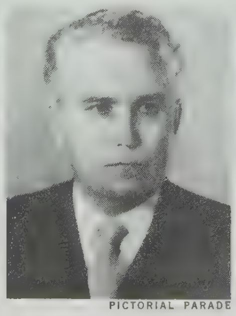
Jeanette MacDonald

PICTORIAL PARADE

Randall Jarrell

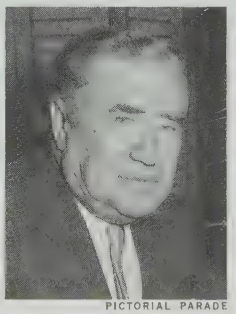
UPI

Frol Kozlov



PICTORIAL PARADE

Quentin Reynolds



PICTORIAL PARADE

Syngman Rhee

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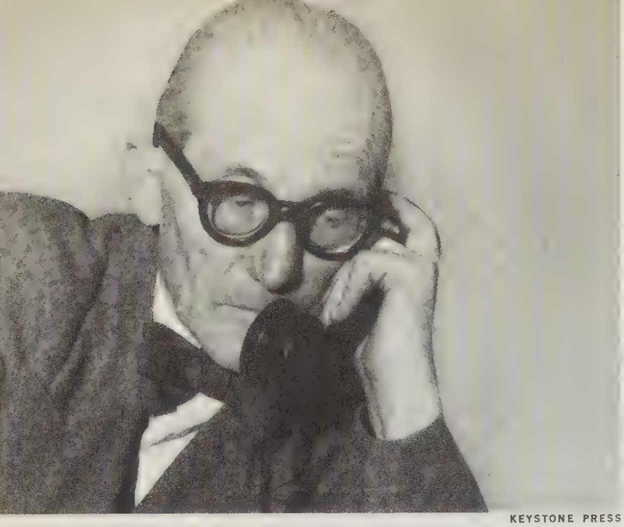


KEYSTONE PRESS

Le Corbusier, French architect.

Long, Oren Ethelbirt (76), U.S. senator: b. Altoona, Kans., March 4, 1889; d. Honolulu, Haw., May 6, 1965. A liberal Democrat, he represented Hawaii in the U.S. Senate from 1959 to 1962. He went to Hawaii as a social worker in 1917 and later served as a teacher and high school principal. As deputy superintendent of public instruction of the Territory of Hawaii (1925–34) and superintendent (1934–46), he did much to improve education in the islands. After five years as secretary of Hawaii, he was appointed territorial governor by President Harry S Truman in 1951 and remained in this post until 1956. He then entered the territorial Senate and in 1959 was elected to the U.S. Senate.

Long, Perrin H. (66), U.S. physician; helped to introduce use of sulfa drugs in U.S.; headed department of preventive medicine at Johns Hopkins University from 1940 to 1951: d. Edgartown, Mass., Dec. 17

Louise (75), queen of Sweden; as wife of King Gustaf VI Adolf, was queen from 1950: d. Stockholm, March 7

Lovelace, W. Randolph, 2nd (57), U.S. physician; was medical director of National Aeronautics and Space Administration, from April 1964: d. near Aspen, Colo., Dec. 12

Lowenstein, Otto (75), German-born neurologist; developed pupillography: d. New York, N.Y., March 25

Macbeth, Madge (82), Canadian author; was first woman president of Canadian Authors Association: d. Ottawa, Ont., Sept. 20

McCormack, Emmet J. (84), U.S. industrialist; cofounder and chairman of the board of Moore-McCormack (Steamship) Lines: d. West Palm Beach, Fla., Feb. 24

McCormick, Mrs. Chauncey (Marion Deering) (78), U.S. socialite; was prominent in cultural, charitable, and social activities; noted for philanthropies: d. Chicago, Ill., Jan. 13

MacDonald, Jeanette Anna (57), U.S. singer and actress: b. Philadelphia, Pa., June 18, 1907; d. Houston, Texas, Jan. 14, 1965. Noted for her lyric soprano voice and wholesome charm, she was best known as costar with baritone Nelson Eddy in the film versions of such operettas as *Naughty Marietta* (1935), *Rose Marie* (1936), *Maytime* (1937), *The Girl of the Golden West* (1938), *Sweethearts* (1938), *New Moon* (1940), *Bittersweet* (1940), and *I Married an Angel* (1942). She began her career as a chorus girl in a Broadway musical in 1921 and later starred in several Broadway productions, including *Yes, Yes, Yvette* (1927), *Sunny Days* (1928), and *Angela* (1928), before her discovery by film director Ernst Lubitsch. Her first films, with Maurice Chevalier, were *The Love Parade* (1929), *One Hour With You* (1931), *Love Me Tonight* (1932), and *The Merry Widow* (1934). Her other films include *The Cat and the Fiddle* (1934), *San Francisco* (1936), *The Firefly* (1937), and *Smilin' Through* (1941). After her retirement from films in 1942, she appeared in grand opera. She was married to actor Gene Raymond.

McDonald, Marie (42), U.S. actress; known as "The Body"; appeared in motion pictures and had starring role in *Living in a Big Way* (1947): d. Hollywood, Calif., Oct. 21

McKechnie, William ("Bill") (78), U.S. baseball manager; elected to Baseball Hall of Fame (1962); won National League pennants with Pittsburgh Pirates (1925), St. Louis Cardinals (1928), and Cincinnati Reds (1939 and 1940): d. Bradenton, Fla., Oct. 29

McLaughlin, Dean B. (64), U.S. astronomer; was an authority on the planet Mars, and on behavior of novae: d. Ann Arbor, Mich., Dec. 8

Maguire, William G. (79), U.S. industrialist; was a pioneer in natural gas industry; president and board chairman of Panhandle Eastern Pipe Line Co.: d. New York, N.Y., Sept. 28

Malcolm X (39), U.S. black nationalist leader: b. Omaha, Neb., May 19, 1925; d. (assassinated) New York, N.Y., Feb. 21, 1965. In 1964, after several years as the most articulate spokesman for the militant Black Muslim sect, he formed his own black nationalist movement, the Organization for Afro-American Unity. A feud developed between the two groups, and at a rally of his followers, Malcolm X was assassinated. A minister's son, originally named Malcolm Little, he acquired a hatred of whites early in life as a result of childhood experiences. In his teens he went to New York and drifted into Harlem's underworld of dope peddlers, procurers, and gamblers, and before he was 21 he was arrested for burglary in Boston. In prison he learned of the Black Muslim sect, which taught the superiority of the Negro, and he accepted its militant and ascetic doctrines. At Black Muslim headquarters in Chicago, following his release, he greatly impressed the sect's leader, Elijah Muhammad, who sent him on speaking tours and placed him in charge of Mosque No. 7 in New York. A speech in which he had made light of President John F. Kennedy's assassination led to his suspension by Elijah Muhammad, and subsequently Malcolm X established his rival organization in Harlem.

Mansour, Hassan Ali (41), premier of Iran; was former minister of labor and of commerce, and deputy premier: d. Teheran, Iran, Jan. 26

Mara, Jack (57), U.S. sportsman; president of New York Giants football team (1936–65): d. New York, N.Y., June 29

Margesson, Viscount David (75), British government official; was secretary of war in Churchill cabinet (1940–42): d. Nassau, Bahamas, Dec. 24

Marshall, Verna (75), U.S. editor; won 1936 Pulitzer Prize for Cedar Rapids (Iowa) *Gazette*: d. Des Moines, Iowa, March 25

Martin, Pepper (John Leonard) (61), U.S. baseball player; member of St. Louis Cardinals teams that won National League pennants (1928, 1931, 1934, 1944): d. McAlester, Okla., March 5

Mary (Victoria Alexandra Alice) (67); princess royal of Great Britain; was only daughter of King George V and Queen Mary, and aunt of Queen Elizabeth II: d. Harewood House, Leeds, England, March 28

Mason, Noah (82), U.S. public official; was U.S. congressman (Republican) from Illinois (1937–63): d. Joliet, Ill., March 29

Maugham, (William) Somerset (91), English author: b. Paris, France, Jan. 25, 1874; d. St.-Jean-Cap-Ferrat, France, Dec. 16, 1965. He was a prolific and versatile writer, whose clear, concise style and imaginative plots made his works perennial favorites. Orphaned in France at the age of 10, Maugham was taken to England where he attended King's School, Canterbury. He later studied at Heidelberg University and interned in medicine at St. Thomas's Hospital, London. In World War I he served with the Red Cross and as an intelligence officer. *Liza of Lambeth* (1897), his first novel, was based on personal experiences, as was *Of Human Bondage* (1915), his best-known work. Other major successes were *The Moon and Sixpence* (1919), *Cakes and Ale* (1930), and *The Razor's Edge* (1944), Maugham's first play, *Schiffbrüchig* (1901), was produced in Germany. His other plays, mostly Edwardian comedies of manners, included *Lady Frederick* (1907), *The Circle* (1921), and *The Constant Wife* (1927). Of his many stories, "Miss Thompson," from his first collection, *The Trembling of a Leaf* (1921), excited the greatest interest and was the basis of the play *Rain*. Two autobiographies, *The Summing Up* (1938) and *A Writer's Notebook* (1949), incorporate his agnostic views and awareness of human fallibility.

Melachrino, George (56), British musician; orchestra leader of band known as Melachrino Strings; was three-time winner of golden disk: d. London, England, June 18

Meyer, Albert (Gregory) Cardinal (62), U.S. Roman Catholic prelate: b. Milwaukee, Wis., March 9, 1903; d. Chicago, Ill., April 9, 1965. Archbishop of Chicago from 1958 and a cardinal from 1959, he championed racial integration and religious brotherhood, and was regarded as a leading progressive and modernizer in the Roman Catholic Church. A graduate of the North American College in Rome, he served as rector of St. Francis Seminary in Milwaukee. Designated monsignor in 1938 and bishop in 1946, he was archbishop of Milwaukee from 1953 to 1958.

Micara, Clemente (85), Italian cardinal; was a leading member of the Curia and the pope's vicar for the city of Rome: d. Rome, Italy, March 11

Mich, Daniel D. (60), U.S. editor; edited *Look* magazine from 1964; was 1963 winner of Richard L. Neuberger Award: d. New York, N.Y., Nov. 22

Mills, Freddie (46), U.S. boxer; was world light heavyweight champion in 1948: d. London, England, July 25

Minton, Sherman (74), U.S. Supreme Court justice: b. Georgetown, Ind., Oct. 20, 1890; d. New Albany, Ind., April 9, 1965. Appointed associate justice of the U.S. Supreme Court by President Harry S Truman in 1949, he generally represented a conservative position on the bench. An honor graduate of Indiana University Law College, he engaged in private law practice and served as counselor of Indiana's Public Service Commission before his election on the Democratic ticket to the U.S. Senate. As a senator (1935–41), he was a strong supporter of liberal New Deal policies. In 1941, after a few months as a White House administrative assistant, he was appointed by President Franklin D. Roosevelt to the U.S. Court of Appeals in Chicago, serving until 1949. He retired in 1956.

Mize, Sidney C. (77), U.S. district judge from 1937; signed order breaking color barrier in Mississippi schools after reversal by Fifth Circuit Court of Appeals: d. Gulfport, Miss., April 26

Monckton, Viscount, of Brenchley (73), British government official; guided King Edward VIII through 1936 constitutional crisis over abdication: d. Falkington, England, Jan. 9

Morey, Lloyd (79), U.S. educator; president of University of Illinois (1954–55): d. Champaign, Ill., Sept. 29

Morrison, Herbert Stanley (77), British public official: b. London, England, Jan. 3, 1888; d. Sidcup, Kent, England, March 6, 1965. A Labour member of Parliament for 27 years, he coordinated British defense efforts and headed

London's civil defense as home secretary and minister of home security in Winston Churchill's World War II coalition cabinet (1940–45). In the postwar Labour government of Clement Attlee, he was deputy prime minister from 1945 until 1951, when he served for several months as foreign secretary. Largely self-educated, he was a conscientious objector during World War I and held various Labour party posts before entering the House of Commons in 1922. From 1929 to 1931 he was minister of transport in Ramsay MacDonald's Labour government. A skillful politician and a member of the right wing of the Labour party, he was created Lord Morrison of Lambeth in 1959.

Motley, Willard (52), U.S. novelist; wrote *Knock on Any Door* (1947), *We Fished All Night* (1951), and *Let No Man Write My Epitaph* (1960): d. Mexico City, Mexico, March 4

Müller, Paul Hermann (66), Swiss chemist: b. Olten, Switzerland, Jan. 12, 1899; d. Basel, Switzerland, Oct. 12, 1965. He received the Nobel Prize for medicine or physiology in 1948 for his synthesis of the insecticide dichloro-diphenil-trichlormethane (DDT). Although DDT originally was discovered in 1874 by Othmar Zeidler in Germany, its potentialities were not realized at the time. Müller received his doctorate at the University of Basel in 1925 and joined the tanning-research laboratory of the J.R. Geigy Co. in Basel, where he began his research on insecticides about 1935. Within a few years, he developed two substances containing DDT—Gesarol and Neocid—which were used effectively by U.S. forces in World War II to combat disease.

Murray, Mae (75), U.S. actress; as queen of silent films was best known for her role in *Merry Widow;* started her career in Ziegfeld *Follies:* d. Woodland Hills, Calif., March 23

***Murrow, Edward R.** (57), U.S. reporter and government official: d. Pawling, N.Y., April 27

Muzzey, David Saville (94), U.S. historian: wrote textbook, *An American History* (1911); biographer of Thomas Jefferson and James G. Blaine: d. New York, N.Y., April 14

Nadi, Aldo (66), Italian-born fencer; was three-medal winner in 1920 Olympics: d. Los Angeles, Calif., Nov. 10

Nahas, Mustafa (86), Egyptian political leader; was premier five times between 1927 and 1952: d. Cairo, Egypt, Aug. 23

Neville, Glenn (59), U.S. newspaper editor; was editor in chief of New York *Mirror* from 1953 until 1963, when paper ended publication: d. Keene Valley, N.Y., June 1

Newton, Eric (71), English author and art critic; wrote *European Painting and Sculpture* (1941), and *Introduction to European Painting* (1949): d. London, England, March 10

Nichols, (Red) Ernest Loring (60), U.S. musician; led popular jazz group, *Red Nichols and His Five Pennies;* recorded extensively in 1930's: d. Las Vegas, Nev., June 28

Noli, Fan Stylian (82), Albanian Greek Orthodox bishop in U.S.; was premier of Albania (1924): d. Fort Lauderdale, Fla., March 13

Norden, Carl Lukas (85), U.S. inventor: b. Semarang, Java, April 23, 1880; d. Zurich, Switzerland, June 14, 1965. A mechanical engineer, he invented, with Frederick I. Entwhistle, the Norden bombsight, which increased the effectiveness of U.S. bombing raids on Germany and Japan during World War II by automatically pinpointing ground targets. As a consulting engineer during World War I, he designed a number of precision devices for military use. In 1928 he and Theodore H. Barth established Carl L. Norden, Inc., which specialized in bombsights and other military aviation equipment. Norden turned over to the U.S. government the patent rights of his inventions.

Nugent, Frank S. (57), U.S. writer; wrote film scripts for *The Quiet Man* and *Mister Roberts;* was New York *Times* motion picture critic (1936–40): d. Los Angeles, Calif., Dec. 29

Offner, Richard (76), Austrian-American art historian; was professor of art history, New York University (1927–57); wrote *The Corpus of Florentine Painting:* d. Ronta, Italy, Aug. 26

Okazaki, Katsuo (68), Japanese diplomat; was former foreign minister and a key figure in Japan's surrender to the Allied powers in 1945: d. Tokyo, Japan, Oct. 10

O'Rourke, John J. (65), was 5th vice president of International Brotherhood of Teamsters; president of Teamsters Local 282 since 1950: d. New York, N.Y., Dec. 6

Otero, Caroline (97), Spanish-born French dancer and celebrated courtesan: d. Nice, France, April 10

Paige, Raymond (65), U.S. musician; was music director of Radio City Music Hall and conductor of its symphony orchestra from 1950: d. Larchmont, N.Y., Aug. 7

Pajak, Antoni (72), Polish government official; was Socialist premier of the Polish government-in-exile from 1955 to 1965: d. London, England, Nov. 26

Palacios, Alfredo Lorenzo (84), Argentine public official; was first Socialist elected to a South American legislature, winning seat in Argentine Chamber of Deputies in 1904: d. Buenos Aires, Argentina, April 20

Parpart, Arthur Kemble (61), U.S. educator; was chairman of Biology Department of Princeton University from 1948: d. Woods Hole, Mass., Sept. 17

Parrish, Carl (61), U.S. musicologist; was professor of music at Vassar College from 1953: d. Valhalla, N.Y., Nov. 26

Pate, Maurice (70), U.S. public official; directed UNICEF from its founding in 1946; assisted Herbert Hoover on Belgian Relief Commission in 1920's: d. New York, N.Y., Jan. 19

Patri, Angelo (89), Italian-American educator; pioneered in liberal teaching; was authority on child guidance: d. Danbury, Conn., Sept. 12

Pavlovsky, Yevgeny N. (81), Soviet zoologist; was an authority on parasitic diseases: d. Moscow, USSR, May 27

Perkins, Frances (83), U.S. public official: b. Boston, Mass., April 10, 1882; d. New York, N.Y., May 14, 1965. The first woman cabinet member and an expert in industrial relations, she served as secretary of labor in Franklin D. Roosevelt's administration from 1933 to 1945. In this post she was instrumental in the adoption of a number of New Deal reforms, including unemployment relief programs, fair labor standards laws, and social security legislation. A graduate of Mount Holyoke College, she later obtained a master's degree from Columbia University and was a social worker for several years. As executive secretary of the Consumers' League of New York (1910–12), she helped bring about reforms in factory conditions in the state. Later she served on the State Industrial Commission, the Council on Immigrant Education, and the State Industrial Board, and was state industrial commissioner from 1929 to 1933. During her tenure as labor secretary, the department's social service, research, and administrative functions were considerably expanded. From 1945 to 1952 she was a member of the U.S. Civil Service Commission. Her books include *The Roosevelt I Knew* (1946).

Persons, Gordon (63), U.S. public official; was governor of Alabama (1951–55): d. Montgomery, Ala., May 29

Pfost, Gracie (59), U.S. public official; was U.S. congresswoman (Democratic) from Idaho (1952–62): d. Baltimore, Md., Aug. 11

Phillips, H.I. ("Hi") (75), U.S. journalist; conducted column, *The Sun Dial,* in New York *Sun;* wrote several books about "Mr. Purkey": d. Milford, Conn., March 15

Pickett, Clarence E. (80), U.S. clergyman; was executive secretary of American Friends Service Committee (1929–50): d. Boise, Idaho, March 17

Ping-Sheung, Foo (69), Nationalist Chinese legal authority; was ambassador to Soviet Union from 1943 until 1949: d. Taipei, Taiwan, July 29

Poleman, Horace (60), U.S. etymologist; chief of Orientalia Division, Library of Congress: d. Washington, D.C., Nov. 6

Posner, John Jacob (76), U.S. oral surgeon; perfected use of novocaine in dentistry: d. New York, N.Y., Feb. 20

Pousette-Dart, Nathaniel (79), U.S. artist; was a writer, teacher, and consultant; edited magazine *Art and Artists of Today:* d. Valhalla, N.Y., Oct. 17

Powell, Dawn (67), U.S. author; satirical novelist; her first work was *She Walks in Beauty* (1928), and her last, *The Golden Spur* (1962): d. New York, N.Y., Nov. 14

Pratt, Ruth Baker (88), U.S. public official; was U.S. representative (Republican) from New York, 1928–32: d. Glen Cove, N.Y., Aug. 23

Purdy, Ray Foote (67), U.S. politician; was board chairman of Moral Re-Armament movement in U.S.: d. Atlanta, Ga., Oct. 30

Rado, Tibor (70), Hungarian-American mathematician; was a contributor to development of mathematical theory and computers: d. Daytona Beach, Fla., Dec. 29

Rajchman, Ludwig J. (84), Polish scientist; was a leader in establishing UNICEF (1947): d. Chenu, France, July 13

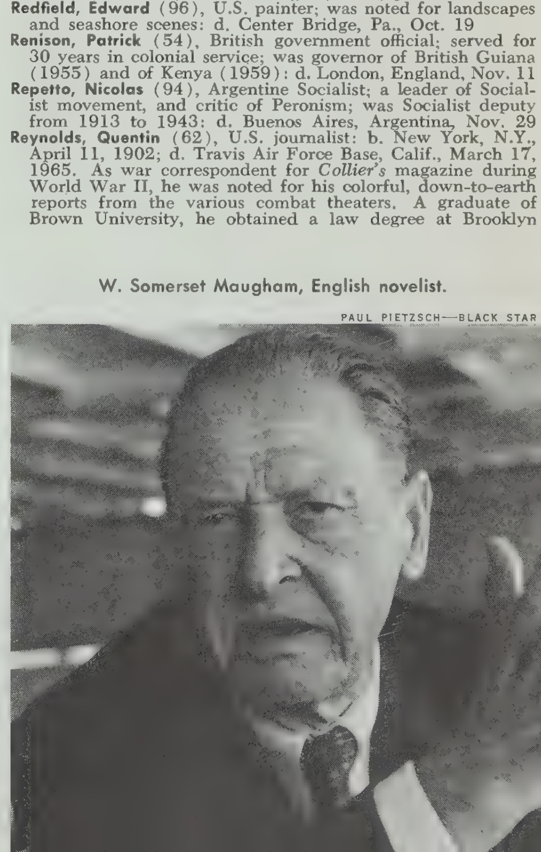
Ralston, Oliver C. (81), U.S. scientist; was an authority on mineral sciences and chief metallurgist with Bureau of Mines (1949–53): d. Washington, D.C., June 21

Redfield, Edward (96), U.S. painter; was noted for landscapes and seashore scenes: d. Center Bridge, Pa., Oct. 19

Renison, Patrick (54), British government official; served for 30 years in colonial service; was governor of British Guiana (1955) and of Kenya (1959): d. London, England, Nov. 11

Repetto, Nicolas (94), Argentine Socialist; a leader of Socialist movement, and critic of Peronism; was Socialist deputy from 1913 to 1943: d. Buenos Aires, Argentina, Nov. 29

Reynolds, Quentin (62), U.S. journalist: b. New York, N.Y., April 11, 1902; d. Travis Air Force Base, Calif., March 17, 1965. As war correspondent for *Collier's* magazine during World War II, he was noted for his colorful, down-to-earth reports from the various combat theaters. A graduate of Brown University, he obtained a law degree at Brooklyn



W. Somerset Maugham, English novelist.

PAUL PIETZSCH—BLACK STAR

Law School in 1930 and began his journalism career as a reporter and sports writer for the New York *Evening World.* He later worked for the New York *World-Telegram* and served as a correspondent for the International News Service before joining *Collier's* as an associate editor in 1934. His books include *The Wounded Don't Cry* (1941), *London Diary* (1941), *Convoy* (1942), *Only the Stars Are Neutral* (1942), *Dress Rehearsal* (1943), *The Curtain Rises* (1944), *Officially Dead* (1945), and the autobiography *By Quentin Reynolds* (1963).

Rhee, Syngman (90), Korean statesman: b. Whanghai Province, Korea, March 26, 1875; d. Honolulu, Hawaii, July 19, 1965. A lifelong fighter for Korean independence, he founded the Republic of Korea (South Korea) in 1948, serving as its first president until 1960. In the Korean War (1950–53) he obtained the support of UN forces in preventing Communist North Korea from overrunning the South, but he strongly opposed the UN-supervised truce of 1953, which fell far short of his goal of national unification. Educated in the classical Chinese tradition, he later studied in the United States and obtained a Ph.D. degree in international law from Princeton University in 1910. He joined the Korean independence movement against Chinese domination in the 1890's, spending several years in prison, and continued his independence activities after Japan took over the country in 1910. From 1919 to 1941 he served as president of a Korean provisional government in exile, and during World War II he was chairman of the Korean Commission in Washington, D.C. During his last years as president of South Korea, his authoritarianism led to increasing opposition, especially from student groups, and in 1960 he resigned and went into exile in Hawaii, where he spent the remainder of his life.

Ribadu, Muhammadu (55), Nigerian government official; was defense minister from 1959 and had served as acting head of government: d. Lagos, Nigeria, May 2

Rickey, Branch Wesley (83), U.S. baseball executive: b. Stockdale, Ohio, Dec. 20, 1881; d. Columbia, Mo., Dec. 9, 1965. An astute front-office man, he created the "farm system" for developing professional baseball players and broke the color barrier by introducing Negro players in the major leagues. A graduate of Ohio Wesleyan University and the University of Michigan law school, Rickey practiced law only briefly. From 1904 to 1907 he was a catcher with the Cincinnati Reds, St. Louis Browns, and New York Yankees. Between 1916 and 1942 he was, respectively, field manager, business manager, secretary, and president of the St. Louis Cardinals, and directed the club to six National League titles and four world championships. In 1919 he inaugurated the farm system by buying an interest for the Cardinals in the Houston club of the Texas League. He became president and general manager of the Brooklyn Dodgers in 1942 and led them to two pennants. In 1945 he selected Jackie Robinson as the first Negro to play in the major leagues. Rickey also served as general manager of the Pittsburgh Pirates from 1950 to 1955, and as board chairman from 1955 to 1959.

Riiser-Larsen, Hjalmar (75), Norwegian aviator and explorer; led unsuccessful air search for Roald Amundsen in 1928 polar expedition: d. Copenhagen, Denmark, June 3

Ringle, Dave (70), U.S. music publisher; was lyricist and composer of popular songs: d. Brooksville, Fla., June 20

Ritz, Al (62), U.S. comedian; oldest member of Ritz Brothers comedy trio; had appeared in several motion pictures; made television debut in 1952: d. New Orleans, La., Dec. 22

Robertson, A.W. (85), U.S. industrialist; was board chairman of Westinghouse Electric Corporation from 1929 to 1951: d. Pittsburgh, Pa., Dec. 18

Robeson, Eslanda Goode (68), U.S. anthropologist; was wife of singer Paul Robeson: d. New York, N.Y., Dec. 14

Rodia, Simon (90), U.S. builder; his controversial Watts Towers in Los Angeles, finished in 1954, were named an historical cultural monument by the Los Angeles Cultural Heritage Board in 1963: d. Martinez, Calif., July 16

Rogers, Walter S. (87), U.S. educator and journalist; was director of Institute of Current World Affairs from 1926 to 1959: d. South Dartmouth, Mass., Oct. 23

Ronai, Sandor (73), Hungarian government official; former president of Hungarian Parliament: d. Budapest, Hungary, Sept. 28

Ruark, Robert Chester (49), U.S. newspaper columnist and author: b. Wilmington, N.C., Dec. 29, 1915; d. London, England, June 30, 1965. Inspired by Ernest Hemingway, he was noted for the hardboiled, masculine quality of his writings. His best-known novel, *Something of Value* (1955), describing in vivid detail the terrors of the Mau Mau rebellion in Kenya, caused considerable controversy. A graduate of the University of North Carolina, he worked as a WPA accountant and a merchant seaman before joining the Washington *News* as a copy boy. Within a short time he was the paper's leading sports writer. After service in the Navy during World War II, he became a regular columnist for the Scripps-Howard Newspaper Alliance. His other books include *Grenadine Etching* (1947), *Horn for the Hunter* (1953), *The Old Man and the Boy* (1957), *Poor No More* (1959), and *Uhuru* (1962).

Rubinstein, Helena (94), U.S. cosmetics executive: b. Cracow, Poland, 1870 (?); d. New York, N.Y., April 1, 1965. A leading authority on beauty culture, and one of the world's wealthiest women, she was founder and president of the cosmetics firm of Helena Rubinstein, Inc., and the owner of an international chain of beauty salons. She began her cosmetics business in Australia in the 1890's, importing skin cream from Europe, and later studied with leading European dermatologists. In 1908 she opened an elaborate beauty salon in London, and in 1914 she moved to the U.S. to lay the groundwork for her worldwide, multimillion-dollar beauty empire.

Rubirosa, Porfirio (56), Dominican diplomat and sportsman; was ambassador to Argentina, France, Italy, Cuba, and Belgium: d. Paris, France, July 5

Russell, Robert Price (66), U.S. chemist; as president of Standard Oil Development Company during World War II, directed research vital to defense: d. Lisbon, N.H., May 28

Sachs, Paul J. (86), U.S. art critic; was professor of fine arts at Harvard University, and renowned authority on prints and drawings: d. Cambridge, Mass., Feb. 18

Sackville-West, Edward (Baron Sackville) (63), English author; well-known novelist and music critic: d. Dublin, Ireland, (reported) July 5

Salote, (65), queen of Tonga; had been ruler of the Pacific Island protectorate since 1918: d. Auckland, N.Z., Dec. 15

Sanders, Joe (68), U.S. song writer and band leader; his nationally known dance band, the Nighthawks, was formed in 1922: d. Kansas City, Mo., May 15

Sansom, Sir George Bailey (82), British government official; served in British embassy in Tokyo, 1905–40; was professor of Japanese at Stanford University from 1955 and an authority on Far Eastern affairs: d. Tucson, Ariz., Mar. 8

Schärf, Adolf (74), Austrian public official: b. Nikolsburg, Austria, April 20, 1890; d. Vienna, Austria, Feb. 28, 1965. A moderate Socialist and a champion of Austrian neutrality, he was president of Austria from 1957 until his death. In this capacity he sought to preserve the coalition between the country's two leading parties, the conservative People's party and the Socialists, by skillfully mediating disputes between them. He began his Socialist activities as a student, and in the post-World War I Austrian Republic he was a civil servant. He became a member of the upper house of Parliament in 1933. Before and during the German occupation of Austria he was imprisoned several times, and during World War II he led the Socialists in underground activities. In the postwar coalition government he served as vice chancellor from 1945 to 1957.

Schipa, Tito (76), Italian singer: b. Lecce, Italy, Jan. 2, 1889; d. New York, N.Y., Dec. 16, 1965. A refined lyric tenor of the *bel canto* school of singing, he sang with leading opera companies and as a concert artist for more than 50 years. Beginning his musical study at an early age, he made his operatic debut in 1911 in Vercelli, Italy. He sang several seasons with the Chicago and San Francisco opera companies before joining New York's Metropolitan Opera in 1932. During World War II, he was accused of being a Fascist, but later regained his popularity.

Schlesinger, Arthur M., Sr. (77), U.S. historian: b. Xenia, Ohio, Feb. 27, 1888; d. Boston, Mass., Oct. 30, 1965. One of the first scholars to emphasize social history, he was Higginson professor of history at Harvard University from 1939 to 1954. He received his B.A. from Ohio State University in 1910 and his Ph.D. from Columbia University in 1918. He taught at Ohio State University and the State University of Iowa before going to Harvard in 1924. His books include *The Colonial Merchants and the American Revolution* (1918), *New Viewpoints in American History* (1922), and *Rise of the City* (1933). He also edited M.L. Hansen's *The American Migration,* which won the Pulitzer Prize for history in 1941, and coedited, with Dixon Ryan Fox, the *History of American Life* (13 vols., 1927–48).

Schwab, Dutch (70), U.S. football player; named to National Football Foundation's Hall of Fame in 1958: d. Spangler, Pa., Dec. 11

Schwartzman, Gregory (69), Russian-born American scientist; had international reputation as microbiologist: d. Philadelphia, Pa., July 21

***Schweitzer, Albert** (90), Alsatian doctor, musician, and theologian: d. Lambaréné, Gabon, Sept. 4

Scott, Zachary (51), U.S. actor; played in more than 30 motion pictures: d. Austin, Texas, Oct. 3

Seagrave, Gordon S. (68), U.S. medical missionary: b. Rangoon, Burma, March 18, 1897; d. Rangoon, March 28, 1965. For more than 40 years he ministered to the medical needs of the Burmese people, building hospitals, training nurses, and practicing medicine in the jungle areas of the country. Descended from three generations of Baptist missionaries, he returned to Burma in 1922 after obtaining his M.D. degree at Johns Hopkins University, and began the construction of a 22-building, 250-bed hospital at Namkham, near the Chinese border. During World War II he placed his facilities at the disposal of the forces of Gen. Joseph V. Stilwell and, as an officer in the U.S. Army Medical Corps, established field hospitals behind the lines. After the war he rebuilt the Namkham hospital, which had been largely destroyed. Arrested in 1950 by the Burmese government for aiding rebel tribesmen, he was later cleared. He was the author of an autobiography, *Burma Surgeon* (1943).

Selznick, David Oliver (63), U.S. film producer: b. Pittsburgh, Pa., May 10, 1902; d. Hollywood, Calif., June 22, 1965. One of Hollywood's leading motion picture executives, he was the producer of the film *Gone With the Wind* (1939), which is regarded as the most lucrative production in motion picture history. He began his career in the film industry as an assistant story editor with Metro-Goldwyn-Mayer, and later became a producer at Paramount and vice president in charge of production at RKO-Radio. In 1935 he established his own firm, Selznick International Pictures. By using the services of the best writers and top stars, and sparing no expense, he produced such notable films as *The Prisoner of Zenda* (1937), *A Star Is Born* (1937), *Intermezzo* (1939), *Rebecca* (1940), *Since You Went Away* (1944), *Duel in the Sun* (1946), and *A Farewell to Arms* (1958).

Sewall, Sumner (67), U.S. public official; was Republican governor of Maine (1941–45): d. Bath, Me., Jan. 25

Sharett, Moshe (70), Israeli statesman: b. Kherson, Ukraine, Russia, Oct. 15, 1894; d. Jerusalem, Israel, July 7, 1965. One of the founders of the state of Israel, he served as its foreign minister from 1948 to 1956 and as premier from 1953 to 1955. He went to Palestine at the age of 12 and became active in Zionist affairs during his youth. As head of the political department of the Jewish Agency for Palestine from 1933 to 1948, he directed the foreign policy of the embryo Jewish nation.

Sheeler, Charles (81), U.S. artist; was considered leading American artist of precisionist school, and had wide reputation as photographer; won Award of Merit of American Academy of Arts and Letters (1962): d. Dobbs Ferry, N.Y., May 7

Shone, Terence (71), British diplomat; from 1946 to 1948 was commissioner ambassador to India; permanent representative to UN (1948–52): d. London, England, Oct. 29

Shotwell, James Thomson (90), U.S. historian: b. Strathroy, Ont., Aug. 6, 1874; d. New York, N.Y., July 15, 1965. One of the most noted historians in the United States, he taught history at Columbia University from 1900 to 1942 and was the author or editor of more than 500 books. He participated in the establishment of the League of Nations, the UN, and other international organizations, and was instrumental in drafting a number of international treaties, including the UN Charter. From 1949 to 1950 he was head of the Carnegie Endowment for International Peace.

Slater, William E. (Bill) (62), U.S. radio and television sports anouncer; broadcast World Series baseball games and football contests: d. New Rochelle, N.Y., Jan. 25

Sloane, Everett (55), U.S. character actor; his films included *Citizen Kane* and *The Men;* appeared in stage plays *A Bell for Adano* (1944), and *The Big Knife* (1949); starred in television play *Patterns:* d. Hollywood, Calif., Aug. 6

Small, Alex (70), U.S. journalist; as foreign correspondent reported Spanish Civil War and World War II, edited feature *100 Years Ago* for Chicago *Tribune:* d. St. Charles, Mo., May 18

Smith, Mrs. Earl E.T. (45), U.S. columnist and television personality; was wife of former ambassador to Cuba: d. New York, N.Y., Nov. 9

Smith, Joan Merriam (28), U.S. aviatrix; made solo flight around the world in 1964: d. Big Pines, Calif., Feb. 17

Sokoloff, Nikolai G. (79), U.S. conductor: b. Kiev, Russia, May 28, 1886; d. La Jolla, Calif., Sept. 24, 1965. He organized (1918) and was conductor of the Cleveland Orchestra until 1932. Going to the U.S. at the age of 12, he began studying at the Yale University School of Music when he was 13. At 17, he joined the Boston Symphony Orchestra as a violinist and was its youngest member. He also served as conductor of the San Francisco and San Diego symphonies and, from 1935 to 1939, was director of the WPA music project.

Sorensen, Carl C. (71), Danish-born U.S. paleontologist; was an expert in preserving and mounting fossilized remains of prehistoric animals: d. New York, N.Y., May 7

Sorensen, Royal (83), U.S. educator and inventor; was professor of electrical engineering at California Institute of Technology, 1910–1952; invented vacuum switch for high potential electric circuit: d. Pasadena, Calif., Oct. 27

Spaeth, Sigmund (80), U.S. musicologist; popularized classical music; was known as *Tune Detective:* d. New York, N.Y., Nov. 11

Spangler, Harrison E. (86), U.S. lawyer and political leader; was national chairman of the Republican party, 1943–1944: d. Portland, Ore., July 28

Speare, Florence Lewis (78), U.S. playwright; wrote *Let's Go A-Gardening* (1913): d. Washington, D.C., May 3

Spring, Howard (75), English novelist; his books included *My Son! My Son!* (1938), *Fame is the Spur* (1940), and *Winds of the Day* (1964): d. London, England, May 3

Stachel, Jacob A. (65), U.S. Communist official; was convicted in 1949 under the Smith Act and served five years in prison: d. New York, N.Y., Dec. 31

Stagg, (Amos) Alonzo (102), U.S. football coach: b. West Orange, N.J., Aug. 16, 1862; d. Stockton, Calif., March 17, 1965. Known as the "grand old man of football," he coached college football teams for more than 60 years. He led his teams to six Big Ten Conference titles, inspired a number of star football players and coaches, helped devise football rules, and pioneered in the development of such tactics as the T-formation and the forward pass. A star pitcher on the Yale University baseball team while attending the Yale Divinity School, he began his coaching career at the YMCA training school at Springfield, Mass., in 1890. He coached the football teams of the University of Chicago for 41 years (1892–1933), of the College of the Pacific for 14 years (1933–47), and of Susquehanna University for six years (1947–53).

Staudinger, Hermann (84), German chemist; won 1953 Nobel Prize in chemistry for discoveries in the field of synthetics: d. Freiburg, Germany, Sept. 9

***Stevenson, Adlai E.** (65), U.S. public official and statesman; d. London, England, July 14

Stewart, Kilton (62), U.S. anthropologist; studied among many primitive peoples and devised the non-language intelligence test named after him: d. New York, N.Y., May 18

Stoddard, Alexander J. (86), U.S. educator; pioneer in educational television: was with U.S. mission to Japan after World War II: d. Los Angeles, Calif., Oct. 18

Stourton, William Marmaduke (Lord Mowbray and Stourton) (70), English premier baron; was responsible for decision to give remains of Lady Anne Mowbray "a decent burial": d. London, England, May 7

Stribling, Thomas Sigismund (84), U.S. author; won 1933 Pulitzer Prize for fiction with novel *The Store;* wrote chiefly of Southern country life: d. Florence, Ala., July 8

Stuhldreher, Harry A. (63), U.S. football coach: b. Massillon, Ohio, Oct. 14, 1901; d. Pittsburgh, Pa., Jan. 26, 1965. He played college football, beginning in 1922, at Notre Dame and was the quarterback of its famous backfield designated by sportswriter Grantland Rice as the "Four Horsemen," at the 1924 Army-Notre Dame game. After graduating from Notre Dame, he served as football coach at Villanova University for 11 years (1924–35) and made its team famous. From 1936 to 1948 he was football coach at the University of Wisconsin, serving concurrently, from 1936 to 1949, as athletic director there.

Sweeney, Walter C., Jr. (56), U.S. Army general; was significant figure in developing jet-powered strategic and tactical air forces, and commanded Tactical Air Command from 1961 to 1965: d. Homestead, Fla., Dec. 22

Szakasits, Arpad (77), Hungarian government official; was president from 1948 to 1950; reportedly was imprisoned on espionage charges and released in 1956; became member of central committee in 1959: d. Budapest, Hungary, May 3

Countess Laszlo Szechenyi (Gladys Vanderbilt) (78), U.S.-born socialite; daughter of Cornelius Vanderbilt 2nd: d. Washington, D.C., Jan. 29

Taber, John (85), U.S. public official; was U.S. congressman (Republican) from New York for 20 consecutive terms (1923 to 1962): d. Auburn, N.Y., Nov. 22

Tanizaki, Junichiro (79), Japanese author; a leading novelist in Japan, his works have been published in the U.S. since 1955: d. Yugawara, Japan, July 30

Taube, Mortimer (54), U.S. author and librarian; founded Documentation, Inc.; was deputy chief of technical information for AEC: d. Annapolis, Md., Sept. 3

Thimayya, Kodendera Subayya (59), Indian army general; had been commander of UN peace force in Cyprus since 1964; named chairman of Neutral Nations Repatriation Commission in Korea in 1953: d. Nicosia, Cyprus, Dec. 18

Thomas, Elmer (89), U.S. public official; Democratic senator from Oklahoma (1927–1950): d. Lawton, Okla., Sept. 19

Thompson, Robert (50), U.S. Communist party leader; chairman, New York State Communist party; indicted by federal grand jury for Smith Act violation (1948): d. New York, N.Y., Oct. 15

Thompson, T. Ashton (49), U.S. representative (Democrat) from Louisiana since 1952: d. Gastonia, N.C., July 2

Thorndike, Lynn (83), U.S. educator; medieval history and science scholar; was author of 10-vol. *A History of Magic and Experimental Science:* d. New York, N.Y., Dec. 28

Thyssen, Mrs. Fritz (87), German industrialist: widow of Fritz Thyssen; established foundation to advance German science: d. Puchhof, Lower Bavaria, Germany, Aug. 25

Tierney, Harry (74), U.S. composer; wrote music for Ziegfeld Follies; his most popular songs were *Rio Rita* and *Alice Blue Gown:* d. New York, N.Y., March 22

Tillich, Paul Johannes (79), German-U.S. theologian and philosopher: b. Starseddel, Germany, Aug. 20, 1886; d. Chicago, Ill., Oct. 22, 1965. One of the world's most influential Christian theologians, he rejected Protestant orthodoxy, maintaining that the Christian message must be interpreted anew by each generation, and that "faith comprises both itself and the doubt of itself." His varied interests encompassed virtually every field of human endeavor, including art, literature, and political theory. His most important work is the three-volume *Systematic Theology*, completed in 1963. After receiving a doctor of philosophy degree from the University of Breslau and the licentiate of theology at Halle University, he was ordained in 1912 in the Evangelical Lutheran Church and served as a chaplain in the Germany army during World War I. He taught at the universities of Berlin, Marburg, Dresden, and Leipzig, and

Branch Rickey

UPI

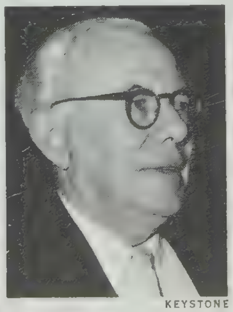
Helena Rubinstein

STEVE SHAPIRO

Amos Alonzo Stagg

UPI

Paul Johannes Tillich



KEYSTONE

Gen. Maxime Weygand

PARIS MATCH

was a member of the university senate in Frankfurt when Hitler came to power in 1933. Dismissed from his academic post because of his openly anti-Nazi stand, he went to the U.S. and, at the invitation of Reinhold Niebuhr, accepted a teaching post at Union Theological Seminary (1934–55) in New York City. Later he taught at Harvard University (1955–62) and the University of Chicago (from 1962).

Truman, J. Vivian (79), U.S. public official; brother of former U.S. President Harry S Truman: d. Grandview, Mo., July 8

Truscott, Lucian King, Jr. (70), U.S. Army officer: b. Chatfield, Texas, Jan. 9, 1895; d. Washington, D.C., Sept. 13, 1965. During World War II he founded the first U.S. Ranger unit and became noted for his rigid training methods. Later he commanded the Third Division of the U.S. Army, which landed in Sicily in 1943 and was the first Allied unit to reach Rome, and the Fifth Army, which fought alongside British forces in the liberation of northern Italy. After the war he served as Third Army commander and military governor of Bavaria. He retired from active duty in 1949 and was promoted to four-star general in 1954. He recounted his war experiences in his book *Command Missions: A Personal Story* (1954).

Tsiang, Tingfu Fuller (69), Chinese diplomat: b. Pao-Ch'ing, China, 1895; d. New York, N.Y., Oct. 9, 1965. He served as Nationalist China's permanent representative to the United Nations from 1947 to 1962 and as ambassador to the United States from 1962 to 1965. After early schooling in China, he went to the United States in 1911, earning his B.A. from Oberlin College in 1918 and his Ph.D. from Columbia University in 1923. Returning to China to teach at Tientsin and Peking universities, he later joined President Chiang Kai-shek's government. He also was ambassador to the USSR in 1936–38.

Uhde, Hermann (51), German operatic baritone; sang in opera at Kiel, Hamburg, and Munich: d. Copenhagen, Denmark, Oct. 10

Vailland, Roger (57), French author; won important literary prizes for his novels, *Playing for Keeps* (1945) and *The Law* (1957): d. Meillonas, France, May 11

Van Hoogstraaten, Willem (81), Dutch-born musician; was guest conductor of summer concerts of New York Philharmonic, and regular conductor of Portland (Ore.) Symphony Orchestra, 1922 to 1938: d. Tutzing, Germany, Sept. 11

van Mook, Hubertus J. (70), Dutch government official; as former lieutenant-governor general of Dutch East Indies, had key role in negotiating Indonesian independence: d. Avignon, France, May 10

Vanderbilt, Gloria Morgan (60), U.S. socialite; lost famous custody fight for daughter (Gloria) in 1936: d. Los Angeles, Calif., Feb. 13

van Eck, J.C. (84), Dutch industrialist; founded Shell Oil Company in U.S. (1912); was president of Shell Union Oil Corp. (1923–36), and managing director of Royal Dutch-Shell Group (1936–47): d. Santa Barbara, Calif., Feb. 16

Van Winkle, Julian (90), U.S. distiller; president of Stitzel-Weller Distillery (1934–64): d. Louisville, Ky., Feb. 16

Varèse, Edgard (81), U.S. composer: b. Paris, France, Dec. 22, 1883; d. New York, N.Y., Nov. 6, 1965. A controversial modernist, best known as the "father of electronic music," Varèse was also a talented conductor. His compositions, using nonmusical devices for instruments, were dubbed "organized noise" by some critics. With the development of such electronic instruments as the theremin, Varèse's musical ideas became more generally accepted, and he was able to fulfill his lifelong ambition of bringing composers and scientists together to solve musical problems. Varèse began his study of music at the age of 17 when he entered the Schola Cantorum in Paris. He went to the U.S. for the first time in 1917, and became a U.S. citizen in 1926. After holding a series of conducting posts, he devoted most of his time to composition. His most famous works are *Tonisation, Arcana, Density 21.5,* and *Poème électronique.*

von Wettberg, Niles W. (52), U.S. editor; associated with *Newsweek* magazine from 1934; had been a senior editor since 1952: d. Suffern, N.Y., Nov. 29

Voorhees, Stephen Francis (86), U.S. architect; former president of American Institute of Architects; was chief architect of 1939 New York World's Fair: d. New York, N.Y., Jan. 25

Walker, Paul A. (84), U.S. attorney; was a member of the Federal Communications Commission from 1934 to 1953; and its chairman, 1952–53: d. Norman, Okla., Nov. 2

*__Wallace, Henry A.__ (77), vice president of the U.S. from 1941 to 1945: d. Danbury, Conn., Nov. 18

Waner, Paul (Big Poison) (62), U.S. athlete; was member of Baseball's Hall of Fame (1952): d. Sarasota, Fla., Aug. 29

Warburg, Paul (61), U.S. financier and philanthropist; was a founder of the Greater New York Fund and member of National Council, Boy Scouts of America: d. New York, N.Y., Oct. 8

Warren, Ethel (du Pont) (49), U.S. socialite; was heiress to du Pont fortune, and formerly was wife of Franklin D. Roosevelt, Jr.: d. Grosse Pointe Farms, Mich., May 25

Weygand, Gen. Maxime (98), French army officer: b. Brussels, Belgium, Jan. 21, 1867; d. Paris, France, Jan. 28, 1965. As commander of the French army in the Battle of France at the beginning of World War II, he counseled surrender to German forces in 1940. A graduate of St. Cyr military academy, he was chief of staff to Marshal Ferdinand Foch during World War I. In 1920 he fought against Bolshevik forces in Paland, and later served as high commissioner to Syria, vice president of the Superior War Council, and inspector general of the French army. After the fall of France he served for a time as war minister and governor general of Algeria under the Vichy regime, but he was later placed under arrest by German authorities. At the end of the war he was imprisoned on charges of collaboration with the Germans, but was subsequently rehabilitated. An adherent of right-wing causes, he was strongly critical of Gen. Charles de Gaulle.

White, Hugh Lawson (84), U.S. public official; was Democratic governor of Mississippi from 1936 to 1940 and from 1952 to 1956: d. Jackson, Miss., Sept. 20

White, Thomas D. (64), U.S. Army general; was chief of staff of the Air Force (1957–61); contributing editor to *Newsweek* magazine since 1961: d. Washington, D.C., Dec. 22

Whitney, H.L. (81), U.S. engineer and sportsman; was instrumental in developing steel alloys: d. East Hampton, N.Y., Oct. 30

Whittemore, Lewis (80), U.S. clergyman; was Episcopal bishop of Western Michigan, 1937–53: d. Martha's Vineyard, Mass., Dec. 5

Wilhelm, prince of Sweden (80), younger brother of King Gustaf VI Adolf; was explorer and big-game hunter: d. Stockholm, Sweden, June 5

Williams, Clarence (67), U.S. jazz musician; composed music for *Baby Won't You Please Come Home* and *Shout, Sister, Shout:* d. New York, N.Y., Nov. 6

Williams, Robert R. (79), U.S. chemist: b. Nellore, India, Feb. 16, 1886; d. Summit, N.J., Oct. 2, 1965. He isolated thiamin (vitamin B_1), determined its structure and synthesis, and discovered that it is an anti-beriberi factor. He studied at the University of Chicago (B.S., 1907; M.S., 1908) and then went to teach in the Philippines. There he became aware of the incidence of beriberi, and spent the next nine years working on the problem with the Bureau of Science in Manila and the Bureau of Chemistry in Washington, D.C. He identified the anti-beriberi factor as thiamin in the 1930's and turned the patent rights over to the Research Corporation, a foundation in New York City, to insure that the vitamin would be developed in the public interest. He also was chemical director of the Bell Telephone Laboratories (1925–45) and served as a consultant to the Research Corporation (1946–60).

Williamson, Charles C. (87), U.S. librarian: from 1926 to 1943 headed Columbia University's School of Library Service and was director of the university's libraries: d. Greenwich, Conn., Jan. 12

Willis, Simeon S. (85), U.S. public official; was Republican governor of Kentucky from 1943 to 1947: d. Frankfort, Ky., April 2

Woodward, Stanley (71), U.S. sports journalist; was sports editor of New York *Herald Tribune* from 1959 until retirement in 1962: d. White Plains, N.Y., Nov. 29

Wszelaki, Jan (70), Polish diplomat; former minister plenipotentiary in Washington of the Polish government-in-exile: d. Washington, D.C., July 2

Yamada, Kosaku (79), Japanese composer and conductor; founded Tokyo Philharmonic Orchestra in 1928 and Japanese Symphonic Orchestra in 1930: d. Tokyo, Japan, Dec. 31

Yermilov, Vladimir V. (61), Soviet literary critic; edited literary journal *Crasnaya* (1932–38) and the literary newspaper *Literaturnaya Gazeta* (1946–50): d. Moscow, USSR, Nov. 19

Yoshizawa, Kenkichi (90), Japanese diplomat; headed delegation that left League of Nations (1933) after Japan invaded Manchuria in 1931: d. Tokyo, Japan, Jan. 5

Zhebrak, Anton (64), Russian plant geneticist; was president of the Academy of Sciences of the Byelorussian Republic before being dismissed in Stalinist purge (1948): d. Moscow, USSR, May 20

Zogbaum, Wilfred M. (49), U.S. sculptor; a widely respected avant-garde sculptor, he exhibited work in numerous international shows: d. Upton, N.Y., Jan. 7

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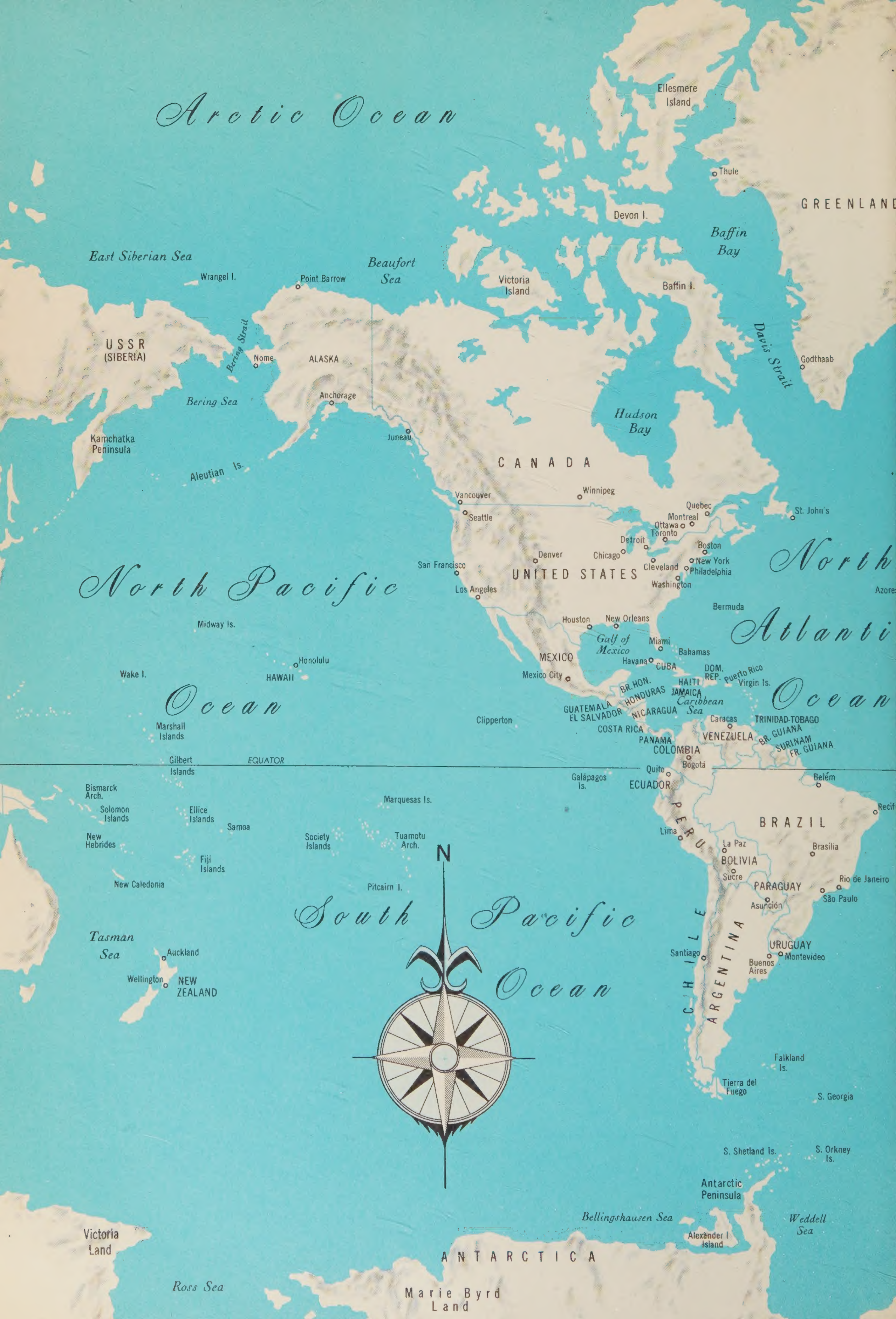
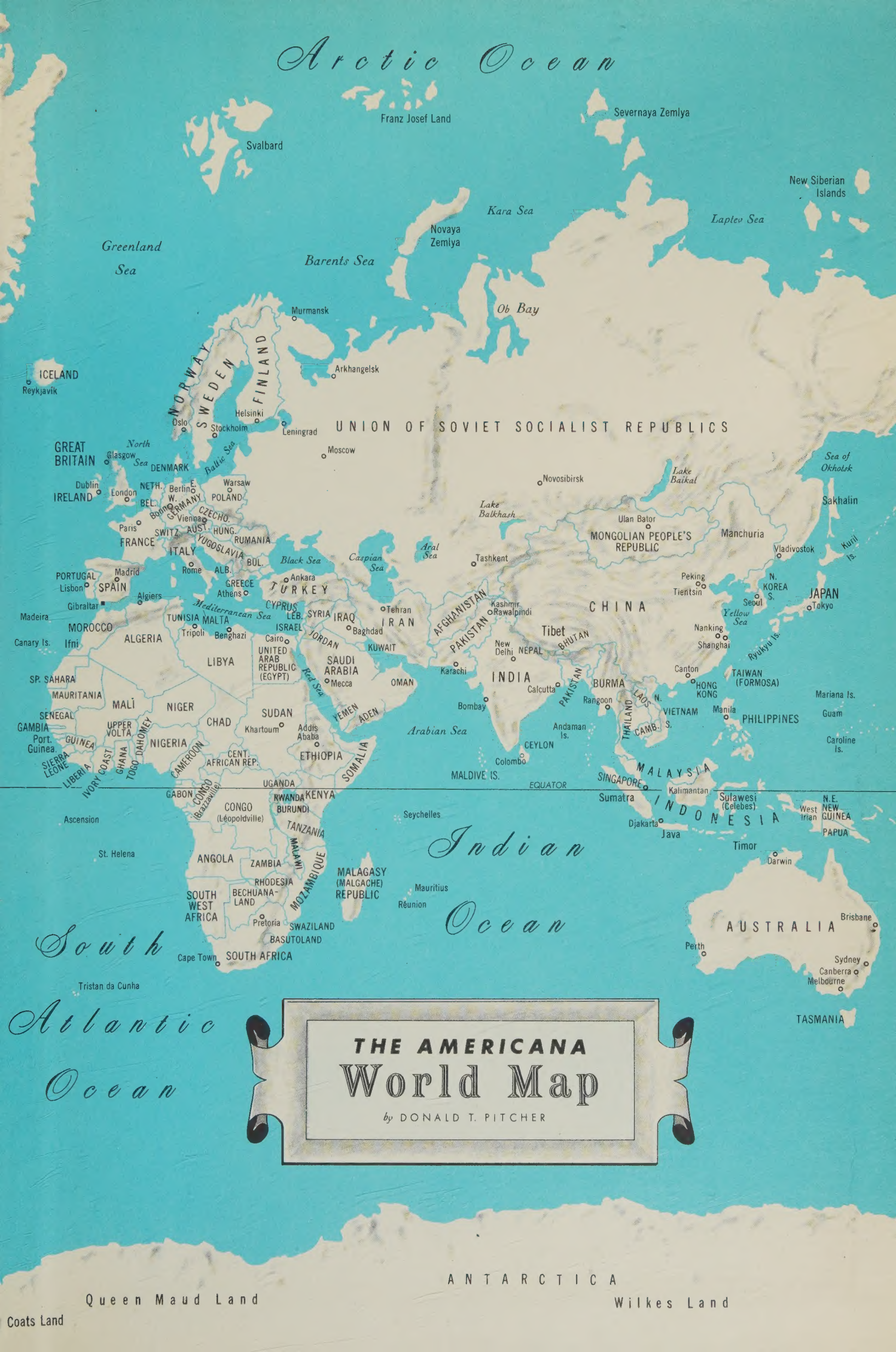

Arctic Ocean
Ellesmere Island
Thule
GREENLAND
Devon I.
Baffin Bay
East Siberian Sea
Wrangel I.
Point Barrow
Beaufort Sea
Victoria Island
Baffin I.
USSR (SIBERIA)
Bering Strait
Nome
ALASKA
Davis Strait
Godthaab
Bering Sea
Anchorage
Hudson Bay
Kamchatka Peninsula
Juneau
Aleutian Is.
CANADA
Winnipeg
Vancouver
Seattle
Quebec
Montreal
Ottawa
Toronto
St. John's
Detroit
Boston
Denver
Chicago
New York
San Francisco
UNITED STATES
Cleveland
Philadelphia
Washington
North Atlantic Ocean
North Pacific Ocean
Los Angeles
Azores
Bermuda
Midway Is.
Houston
New Orleans
Gulf of Mexico
Miami
Bahamas
MEXICO
Havana
CUBA
Honolulu
Wake I.
HAWAII
Mexico City
DOM. REP.
Puerto Rico
BR. HON.
HAITI
Virgin Is.
HONDURAS
JAMAICA
Caribbean Sea
GUATEMALA
EL SALVADOR
NICARAGUA
Caracas
TRINIDAD-TOBAGO
Marshall Islands
Clipperton
COSTA RICA
BR. GUIANA
PANAMA
VENEZUELA
SURINAM
FR. GUIANA
COLOMBIA
Bogotá
Gilbert Islands
EQUATOR
Galápagos Is.
Quito
ECUADOR
Belém
Bismarck Arch.
Marquesas Is.
Recife
Solomon Islands
Ellice Islands
Samoa
BRAZIL
PERU
New Hebrides
Society Islands
Tuamotu Arch.
Lima
La Paz
BOLIVIA
Brasília
Fiji Islands
Sucre
N
New Caledonia
Pitcairn I.
PARAGUAY
Rio de Janeiro
São Paulo
Asunción
South Pacific Ocean
Tasman Sea
CHILE
ARGENTINA
URUGUAY
Santiago
Montevideo
Auckland
Buenos Aires
Wellington
NEW ZEALAND
Falkland Is.
Tierra del Fuego
S. Georgia
S. Shetland Is.
S. Orkney Is.
Antarctic Peninsula
Bellingshausen Sea
Weddell Sea
Victoria Land
Alexander I Island
ANTARCTICA
Ross Sea
Marie Byrd Land



THE AMERICANA
World Map

by DONALD T. PITCHER

Arctic Ocean
Franz Josef Land
Severnaya Zemlya
Svalbard
New Siberian Islands
Kara Sea
Laptev Sea
Novaya Zemlya
Greenland Sea
Barents Sea
Ob Bay
Murmansk
Arkhangelsk
ICELAND
Reykjavik
NORWAY
SWEDEN
FINLAND
Helsinki
Oslo
Stockholm
Leningrad
UNION OF SOVIET SOCIALIST REPUBLICS
Moscow
GREAT BRITAIN
North Sea
Glasgow
DENMARK
Baltic Sea
Dublin
IRELAND
London
NETH.
Berlin
E.
W. GERMANY
Warsaw
POLAND
BEL.
Bonn
CZECHO.
Vienna
Paris
SWITZ.
AUST.
HUNG.
FRANCE
ITALY
YUGOSLAVIA
RUMANIA
BUL.
Black Sea
Caspian Sea
Aral Sea
Tashkent
Novosibirsk
Lake Baikal
Lake Balkhash
Ulan Bator
MONGOLIAN PEOPLE'S REPUBLIC
Manchuria
Sea of Okhotsk
Sakhalin
Vladivostok
Kuril Is.
PORTUGAL
Lisbon
Madrid
SPAIN
Rome
ALB.
GREECE
Athens
Ankara
TURKEY
Peking
Tientsin
N. KOREA
S.
Seoul
JAPAN
Tokyo
Gibraltar
Algiers
Mediterranean Sea
CYPRUS
LEB.
SYRIA
IRAQ
Tehran
IRAN
AFGHANISTAN
Kashmir
Rawalpindi
CHINA
Yellow Sea
Madeira
MOROCCO
TUNISIA
MALTA
ISRAEL
Baghdad
PAKISTAN
Tibet
Nanking
Shanghai
Ryukyu Is.
Canary Is.
Ifni
ALGERIA
Tripoli
Benghazi
Cairo
JORDAN
KUWAIT
New Delhi
NEPAL
BHUTAN
LIBYA
UNITED ARAB REPUBLIC (EGYPT)
Red Sea
SAUDI ARABIA
Mecca
Karachi
INDIA
Calcutta
PAKISTAN
Canton
HONG KONG
TAIWAN (FORMOSA)
SP. SAHARA
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Pretoria
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Cape Town
SOUTH AFRICA
Perth
Sydney
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Melbourne
Tristan da Cunha
TASMANIA
ANTARCTICA
Queen Maud Land
Wilkes Land
Coats Land